



# **Herbal Treatment of Common Diseases in West Africa**



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*Bobo-Dioulasso, Décembre 2011.*

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## **Foreword**

The manner in which herbal medicines are used varies widely among populations worldwide. Whilst some people use herbal medicines alone (often as an alternative to a conventional medical treatment), others used them in combination with other alternative therapies, or along with conventional medical therapies.

Given the increasing popularity of herbal medicine globally, it is imperative that all healthcare professionals, health training and research institutions as well as all other stakeholders have some basic knowledge of the most common herbs patients often use for disease treatment.

This is important for two main reasons. Firstly, it is important for health personnel to have an understanding of all the health services their patients may be accessing. Secondly, since health personnel (especially doctors, nurses and pharmacists) are often used by patients to access information on all health and health-related issues, knowledge of the main indications and actions of these herbs will enable them to advise their patients appropriately.

In view of this, the WHO/AFRO developed some generic training modules, guidelines and model protocols, with the aim of deepening understanding of both Traditional Medicine Practitioners and Conventional Medical Practitioners in key aspects of traditional medicine, especially herbal medicine. These tools included a training module on primary health care and malaria for conventional health practitioners and traditional health practitioners; and model protocols for priority diseases such as HIV/AIDS, sickle cell anaemia, diabetes and hypertension. PROMETRA International has also added to this repertoire of training tools and protocols.

Using these materials, some institutions in Ghana, Kenya, Burkina Faso, Mali, Benin, Guinea and Nigeria have already conducted systematic research on traditional medicines used for the management of diseases such as malaria, hypertension, diabetes, sickle cell anaemia among others.

However, to date there appears to be no reference document of African origin that provides basic information on the herbal treatment of the most common diseases that affect the populations.

The development of this booklet is a modest attempt by the West African Health Organisation to address this need.

Among other things, the booklet will serve as a useful source of information on the herbal treatment of these diseases for doctors, pharmacists, Traditional Medicine Practitioners, medical herbalists and students of African Traditional Medicine.

**Dr Johanna Austin Benjamin**  
**Director, Department of Primary Healthcare and Disease Control**

## **Preface**

Herbal medicines are assuming greater importance in the primary health care of many countries around the world, with an attendant increase in international trade. For example, between 2003-2004 annual revenues in Western Europe reached US\$ 5 billion, whilst in China, sales of products totaled US\$ 14 billion in 2005. Revenue from herbal medicines in Brazil amounted to US\$ 160 million in 2007.

Herbs are used to treat a wide variety of both acute and chronic conditions such as simple bruises, skin disorders, fever, malaria, hypertension, diabetes, sickle cell anaemia, sexual weakness, piles, and even for combating rapid development of AIDS in People Living With HIV.

Apart from being used directly as therapeutic agents, medicinal plants are also important for pharmacological research and drug development, as they provide new leads for the synthesis of essential medicines.

Herbs contain a multiplicity of related compounds that interact. For this reason, herbalists argue that the sum of the biological effects of these compounds is often greater than the so-called "major active ingredient", and that these families of compounds can act on several different targets simultaneously to give overall biological benefit. For example, the compound lycopene found in tomato is thought to be a potent antioxidant, but has also been found to have effects on prostate cells, on DNA and on cellular communication. However, research in experimental animals have shown that purified lycopene lacks the anti-prostate cancer activity characteristic of tomato paste, which contains the plant's full complement of related phytochemicals including lycopene, phytoene, and phytofluene. Furthermore, it has been shown that the contributions of other analogues of the so-called active compound, or even unrelated compounds to the biologically effective dose, can minimize the risk of toxicity.

In the light of the foregoing, vis-à-vis the current upsurge of interest in herbal preparations as alternatives to pharmaceuticals, it has become even more necessary for doctors and other health care professionals to understand the actions and indications of medicinal plants to ensure consumer safety. This is all the more pertinent given the erroneous view many people have of herbal medicines as being totally free of adverse effects because they are natural.

This document, which has been prepared through a series of meetings of experts drawn from the ECOWAS sub-region and coordinated by the Programme Officer for Traditional Medicine, Dr Kofi Busia, outlines the causes, clinical features, methods of investigation and the the modern approach to treatment of some of the most common diseases that affect West Africans. Above all, information on the herbs used to treat the various diseases together with prevention and control measures is also provided.

It is hoped that this booklet, together with others yet to be produced, will serve as a useful adjunct to the West African Herbal Pharmacopoeia.

**Dr Placido Cardoso**  
**Director General**

## **List of Abbreviations**

ECOWAS	Economic Community of West African States
WHO	World Health Organisation
WAHO	West African Health Organisation
TMP	Traditional Medicine Practitioner
PROMETRA	Promotion de la Médecine Traditionnelle
WAHP	West African Herbal Pharmacopoeia

## **Introduction**

According to the World Health Organization (WHO), nearly four billion people, 80% of the world's especially in Asia and Africa presently use herbal medicine for some aspect of primary health care.

Interest in and usage of herbal preparations as alternatives to pharmaceuticals and the search for drugs and dietary supplements derived from plants have accelerated in recent years. Many of the pharmaceuticals currently available to physicians, such as opium, aspirin, digitalis, and quinine, are derived from herbal remedies. In fact, according to the World Health Organisation, approximately 25% of modern drugs used in the United States have been derived from plants.

The rise in popularity of herbal medicine is also attributed to disenchantment with the cost, complexity and perceived limitations of modern medicine.

Herbal remedies are available in many forms, such as teas, infusions, pills, powders, capsules, extracts, and syrups. Many can be bought over the counter. While complete safety and efficacy data for all herbal remedies are not available, many have been well established through historic use.

This manual is brilliantly organized to serve as a "ready reference" on the most common diseases that affect West Africans and the available treatment methods (conventional and traditional).

The information presented in the following pages has been obtained from extensive academic research of herbal literature that ranges from ancient herbal texts to modern phytopharmaceutical journals. Moreover, much of the language used throughout the text is in the vernacular of modern orthodox medicine and the diseases are outlined using conventional medical terminology, and the plants indicated for diseases have been listed as it is done in conventional medicine.

However, it must be emphasized that in herbal medicine, disease is not seen as a separate entity and therefore is not treated as such. Herbs work to strengthen weakened body systems by stimulating the body's own innate, self healing mechanisms. Indeed, the best way to obtain the benefits of herbal medicine is to combine herbs with each other. Although a single herb such as echinacea can be helpful, the really dramatic results are obtained through the synergistic reaction that occurs when herbs are combined together.

Thus, herbal treatment must be part of a multi-modal holistic programme that embodies a natural wholesome diet, ample exercise and rest, a positive attitude, fulfilling work, and a simple lifestyle. This combination will almost always have a favorable influence on one's health and often induces healing where modern medicine has failed.

However, it must be understood that there can never be any guarantees that herbs will always help or heal every health problem for which they are indicated. There is no form of medicine, herbal or otherwise, that can make such a guarantee.

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## **N° 1: SICKLE CELL ANAEMIA**

### **1. Description**

Sickle cell anaemia (or anaemia, SCA) or “drepanocytosis” is caused by an inherited abnormal haemoglobin (an oxygen-carrying protein within the red blood cells). The abnormal haemoglobin causes distorted (sickled) red blood cells, which are fragile and prone to rupture. Decrease in the number of red blood cells from rupture (haemolysis), results in anemia. The irregular sickled cells can block blood vessels causing tissue and organ damage and pain.

Sickle-cell disease occurs more commonly in people (or their descendants) from parts of tropical and sub-tropical regions where malaria is or was endemic. In these areas, carrying only a single sickle-cell gene (sickle cell trait) appears to confer immunity from malaria. Those with only one of the two alleles of the sickle-cell disease, while not totally resistant, are more tolerant to the infection and thus show less severe symptoms when infected.

Nearly 120 million people worldwide are carriers. According to the WHO in the coming decades, the number of carriers of hemoglobin disorders would peak at around 8% of the world population. Approximately one fifth of those who have the disease may show symptoms. The incidence in Africa varies from 8-15%, sometimes 20 to 30%. Previously, patients had shortened life expectancy. For example in 1994, in the US, the average life expectancy of persons with this condition was estimated to be 42 years in males and 48 years in females, but today, due to improved diagnostic methods and better management of the disease, patients can live into their 50s or beyond.

### **2. Causes**

Sickle cell anaemia is inherited as an autosomal (i.e. the gene is not linked to a sex chromosome) recessive condition, which is passed from parent to child. The inheritance of just one sickle gene is called sickle cell trait or the "carrier" state. Sickle cell trait does not cause sickle cell anemia. Persons with sickle cell trait usually do not have many symptoms of disease and have normal hospitalization rates and life expectancies. In order for sickle cell anaemia to occur, a sickle cell gene must be inherited from both the mother and the father, so that the child has two sickle cell genes. The offspring of two carriers of sickle cell trait, a one in four chance of having sickle cell anemia. (In some parts of Africa, one in five persons is a carrier for sickle cell trait.) This is why some communities discourage marriages between two people with the disease or trait.

The sickling is promoted by conditions which are associated with low oxygen levels, cold, humidity, increased acidity, or low volume (dehydration) of the blood. These conditions can occur as a result of injury to the body's tissues, dehydrating states, or anesthesia. When not receiving enough oxygen, red blood cells become sickle-shaped and grows, and can not easily pass through small capillaries that are in the body, causing pain.

### **3. Signs and symptoms**

Virtually all of the major symptoms of sickle cell anemia are the direct result of the abnormally shaped, sickled red blood cells blocking the flow of blood that circulates through the tissues of the body. The tissues with impaired circulation suffer damage from lack of oxygen. Damage to tissues and organs of the body can cause severe disability in patients with sickle cell anemia. The patients endure episodes of intermittent "crises" of variable frequency and severity, depending on the degree of organ involvement.

Some features of sickle cell anemia, such as fatigue, anaemia, pain crises, and bone infarcts can occur at any age. Many features typically occur in certain age groups.

Sickle cell anemia usually first presents symptoms in the first year of life. Infants and younger children can suffer with fever, abdominal pain, pneumococcal bacterial infections, painful swellings of the hands and feet (dactylitis), and splenic sequestration. Adolescents and young adults more commonly develop leg ulcers, aseptic necrosis, and eye damage.

Symptoms in adult typically are intermittent pain episodes due to injury of bone, muscle, or internal organs.

Complications of sickle cell disease are: priapism leading to impotence, circulatory collapse and stroke.

#### **4. Investigations**

Sickle cell anemia is suggested when the abnormal sickle-shaped cells in the blood are identified under a microscope. In industrialized countries, the diagnosis is made in the neonatal period when parents are at risk or afflicted. In non-industrialized countries, the diagnosis is often the first manifestation or complication.

Apart from the findings common to all hemolytic anemias, diagnosis relies on the detection of hemoglobin S. This can be done:

- Observation under a microscope of a smear of blood using a special low-oxygen preparation, called sickle prep. Other prep tests can also be used to detect the abnormal hemoglobin S, including solubility tests performed on tubes of blood solutions.

By haemoglobin electrophoresis test of the hemolysate of red blood cells which show, in the homozygote, a single band of hemoglobin migrating abnormally slowly, and in the heterozygous presence of two bands of hemoglobin, which is the fastest hemoglobin A and the other hemoglobin S. Prenatal diagnosis (before birth) of sickle cell anemia is possible using amniocentesis or chorionic villus sampling. The sample obtained is then tested for DNA analysis of the fetal cells.

#### **5. Treatment**

##### **5.1. Modern**

The treatment of sickle cell anemia is designed according to which of the individual features of the illness are present. In general treatment is directed at the management and prevention of the acute manifestations as well as therapies directed toward blocking the red blood cells from stacking together. There is no single remedy to reverse the anemia. It is, therefore, important that family members have an optimal understanding of the illness and that communication with the doctors and medical personnel be maintained.

Treatment of sickle cell anaemia is based on:

- Treatment of vaso-occlusive crisis: painkillers and oxygen therapy;
- Prevention of the triggers of the crisis (cold, altitude, infections, dehydration);
- Folate supplementation;
- Preventive treatment of meningococcal and pneumococcal infections;
- Blood transfusion in cases of severe anaemia or severe infection.

Hydroxyurea is a medication that is currently being used in adults and children with severe pain from sickle cell anemia. It acts by increasing the amount of fetal haemoglobin (a form of haemoglobin resistant to sickling of the red blood cells) in the blood. This drug appears to significantly reduce the number of painful crises and mortality of the disease. However, its effect is variable and unpredictable from patient to patient. Hydroxyurea can be toxic to the bone marrow. The other obstacle to its use is its cost.

##### **5.2. Herball treatment**

Treatment may be beneficial through: education, empowerment, symptomatic pain management, use of medicinal plants such as *Zanthoxylum zanthoxyloides*, *Calotropis procera*, *Khaya senegalensis*, *Sorghum bicolor* and *Carica papaya*.

#### **6. Prevention and control**

Prevention of pneumococcal infections in young children is by vaccination. Blood transfusions could significantly reduce the risk of vascular-cerebral accidents in some

children particularly at risk. To avoid attacks, it is recommended to follow the following simple steps:

- Drink water frequently;
- Sleep in or use well-ventilated rooms
- Maintain stable weigh
- Keep warm
- Eat foods rich in iron, or facilitate iron absorption (red meat, liver pate ...)
- Avoid cold environments and respiratory infections;
- Wear loose clothing;
- Avoid extreme heat (dehydration triggers crises by increasing blood viscosity).

## **7. Références**

Health Encyclopedia - Diseases and Conditions.

<http://www.healthscout.com/nav/ency/1/main.html>

[http://www.medicinenet.com/sickle\\_cell/article.htm](http://www.medicinenet.com/sickle_cell/article.htm)

## **N° 2: HIV/AIDS**

### **1. Description**

HIV (human immunodeficiency virus) is the cause of AIDS (acquired immunodeficiency syndrome). HIV is a type of virus called a retrovirus, which infects humans when it comes into contact with a break in the skin or tissues such as those that line the vagina, anal area, mouth, or eyes or through a break in the skin.

All countries of the world are affected by the disease, but Sub-Saharan Africa is by far the worst affected region. According to the World Bank, in 2008, more than five million adults and children were infected with HIV. In Côte d'Ivoire, the prevalence is 4.7%, Ghana 2.2%, rising 1.8% in Burkina Faso. In Benin, the Gambia, Guinea, Guinea-Bissau, Liberia, Mali, Nigeria, Sierra Leone and Togo, the prevalence rate is between 1.2% and 1.5%, while the prevalence rate according to the Centers ANC is between 2.8% and 6.7%. Senegal, Niger and Cape Verde have a prevalence of less than 1%. The available data is much more "mixed" and complex. AIDS is the final stage of infection with HIV. An AIDS patient necessarily has HIV infection, while all people infected with HIV do not necessarily have developed AIDS.

Generally, three stages of HIV infection are described:

Initial stage (primary infection): occurs within weeks of acquiring the virus; often characterized by a flu- or mono-like illness that generally resolves within weeks.

Stage of chronic asymptomatic infection: a long duration of infection without symptoms, which lasts an average of 8-10 years.

Stage of symptomatic infection: the body's immune (or defence) system has been suppressed and complications have developed, i.e. acquired immunodeficiency syndrome (AIDS). The symptoms are caused by the complications of AIDS, which include one or more unusual infections ("opportunistic infections") or cancers, severe loss of weight, and intellectual deterioration (called dementia).

### **2. Causes**

HIV is present to variable degrees in the blood and genital secretions of virtually all individuals infected with HIV, regardless of whether or not they have symptoms. The spread of HIV can occur when these secretions come in contact with tissues such as those lining the vagina, anal area, mouth, eyes (the mucus membranes), or with a break in the skin, such as from a cut or puncture by a needle. The most common ways in which HIV is spreading throughout the world include sexual contact, sharing needles, and by transmission from infected mothers to their newborns during pregnancy, labour (the delivery process), or breastfeeding.

### **3. Signs and symptoms**

Rarely, some individuals develop complications of HIV that define AIDS within one year, while others remain completely asymptomatic after as many as 20 years from the time of infection. However, in the absence of antiretroviral therapy, the time for progression from initial infection to AIDS is approximately eight to 10 years.

Within weeks of infection, many people will develop the varied symptoms of primary or acute infection, which typically has been described as a "mononucleosis" or "influenza"-like illness but can range from minimal fever, aches and pains to very severe symptoms. The most common symptoms of primary HIV infection are

- fever,
- aching muscles and joints,
- sore throat,
- swollen glands (lymph nodes) in the neck

Shortly after primary infection, most individuals enter a period of many years where they have no symptoms at all. During this time, CD4 cells may gradually decline, and with this decline in the immune system, patients may develop the mild symptoms of HIV such as vaginal or oral candidiasis thrush (a fungal infection), fungal infections of the nails, a white

brush-like border on the sides of tongue called hairy leukoplakia, chronic rashes, diarrhoea, fatigue, and weight loss. With a further decline in function of the immune system, patients are at increasing risk of developing more severe complications of HIV, including many more serious infections (opportunistic infections), malignancies, severe weight loss, and decline in mental function.

#### 4. Investigations

- ELISA for HIV antibodies-confirmed by a Western blot test
- Tests can be done for these same antibodies in saliva, some providing results within one to 20 minutes of testing

HIV antibodies usually develop within several weeks of infection. During this period, patients may have symptoms of primary HIV infection, but will test negative by the standard testing methods ("window period"). For the avoidance of doubt, a test that specifically detects the presence of virus in the blood rather than the antibodies (e.g. tests for HIV RNA or p24 antigen) or a test that measures both HIV antibodies and p24 antigen, reducing the duration of the window period from infection to diagnosis. Identifying and diagnosing individuals with primary infection is important for early care and counseling and prevention of transmission to others.

#### 5. Treatment

- When HIV grows (that is, by reproducing itself), it acquires the ability to change (mutate) its own structure. This mutation enables the virus to become resistant to previously effective drug therapy.
- The goals of drug therapy are to prevent damage to the immune system by the HIV virus and to halt or delay the progress of the infection to symptomatic disease.
- Therapy for HIV includes combinations of drugs that decrease the growth of the virus to such an extent that the treatment prevents or markedly delays the development of viral resistance to the drugs.

The best combination of drugs for HIV has not yet been defined, but one of the most important factors is that the combination be well tolerated so that it can be followed consistently without missing doses.

It is important to note that with effective antiretroviral therapy many of the signs and symptoms of HIV as well as severity of immunosuppression can be completely reversed, restoring even the most symptomatic patients to a state of excellent health.

##### 5.1. Modern treatment

Management of HIV/AIDS is primarily assumed by practitioners of conventional medicine including diagnosis, treatment with anti-retroviral (ARV) drugs, biological monitoring and prevention.

##### 5.2. Herbal treatment

Many patients use herbal therapy to treat HIV/AIDS symptoms. These resources, however, remain poorly explored and exploited. Although many traditional healers consider themselves able to treat HIV / AIDS, the evidence is insufficient. Among the most commonly used herbs are: *Zanthoxylum xanthoxyloides* (root bark); *Guiera senegalensis* (leaves); *Moringa oleifera* (leaves); *Spirulina platensis*; *Adansonia digitata* (stem bark); *Momordica charantia* (leaves); *Phyllanthus niruri* (leaves); *Alstonia boonei* (stem bark) and *Allium sativum* (bulb).

#### 6. Prevention and control

In Africa, five main sources for the spread of HIV have been noted:

- Multiplicity of sexual partners/infidelity;
- Poor perception of risk and denial of AIDS;
- The socio-economic subordination of women;
- Poverty;
- Prostitution

Other determinants that play a role in the spread of HIV are:

- Degeneration of moral and social values
- Illiteracy
- Refusal to use condoms
- Migration
- Early sexual activity of girls with older partners
- Prevalence of STIs
- Stigmatization of PLWHA
- Lack of support for PLHHA

## 7. References

- République du Bénin (2007) : *Manuel de formation des praticiens de la médecine traditionnelle sur la prise en charge des IST et du VIH/sida*, Cotonou.
- Banque Mondiale (2008) : *Synthèse de la réponse et épidémiologie du VIH/sida en Afrique de l'ouest : implications pour la prévention*, Programme mondial de lutte contre le VIH/sida de la Banque mondiale.
- ONUSIDA (2006) : *Rapport sur l'épidémie mondiale de Sida : profils de pays*.

## N° 3: TUBERCULOSIS

### 1. Description

Tuberculosis (TB) is an infectious, transmissible disease, caused by *Mycobacterium tuberculosis*. It is the third leading cause of death from infectious disease worldwide, affecting mostly people living in poor conditions, particularly in sub-Saharan Africa. Over 8 million new cases of TB occur each year worldwide. The incidence of the disease is very high in Africa, with almost 13% against less than 1% in Asian countries. It is common among intravenous drug users and HIV patients. TB can affect anyone, but the most susceptible groups are people, who live with individuals with an active TB infection, poor or homeless people, nationals from countries that have a high prevalence of TB, nursing-home residents and prison inmates, alcoholics, and intravenous drug users, diabetics, certain cancers, and HIV infection and health-care workers. Because of the frequent occurrence of relapses (emergence of multidrug-resistance) and the fact that it is one of the opportunistic infections of HIV/AIDS, pulmonary tuberculosis remains a public health concern in Africa and is responsible for many deaths.

### 2. Causes

TB is most often caused by a germ called *Mycobacterium tuberculosis* or *Mycobacterium Koch* (BK). Tuberculosis is spread (transmitted). Human transmission is primarily from person to person by inhaling infected air during close contact. The bacteria get into the air when an infected person coughs, sneezes, shouts or spits. Thus, TB cannot be contracted by just touching the clothes or shaking the hands of someone who is infected. When the inhaled tuberculosis bacteria enter the lungs, they can reproduce and cause a local lung infection (pneumonia). This may then provoke an enlargement of the local lymph nodes associated with the lungs are even those adjacent to the heart in the central part of the chest. TB can also spread to other parts of the body. There is also a form of atypical tuberculosis, caused by the bacteria *Mycobacterium bovis* that is transmitted by drinking unpasteurized milk. It used to be a major cause of TB in children, but it rarely causes TB now with the introduction of pasteurized. Other forms of TB causatives agents are *Mycobacterium africanum* and *Mycobacterium canetti* (mainly in Djibouti).

### 3. Signs and symptoms

TB can remain in an inactive (dormant) state for years without causing symptoms or spreading to other people. The most common symptoms are generalized tiredness or weakness, fever, weight loss, coughing, and night sweats, but in general the disease progresses in two phases:

- A phase marked by early signs of tuberculosis comprising of a fever in the evening, wasting (weight loss more than 10 kg), asthenia (fatigue), anorexia (lack of appetite), amenorrhoea (absence of menstruation) in women, night sweats, etc.
- A phase state where cough is the main sign- chronic cough of more than three weeks with muco-purulent, blood-stained sputum or chest pain and shortness of breath, combined with the early signs of TB.

### 4. Investigations

The diagnosis of TB involves skin tests, chest X-rays, sputum analysis (smear and culture), and PCR tests to detect the genetic material of the causative bacteria.

### 5. Treatment

#### 5.1. Modern

The body's immune system is capable of fighting off the infection and stopping the spread of the bacteria. However, when the immune system of a patient with dormant TB is weakened, the TB can become active and cause infection in the lungs or other parts of the body.

- Inactive TB-treated with an antibiotic, isoniazid (INH), to prevent the infection from becoming active

- Active TB-treated with INH in combination with one or more of several drugs, including rifampin (Rifadin), ethambutol (Myambutol), pyrazinamide, and streptomycin.  
Poor patient compliance, lack of detection of resistant strains, and unavailable therapy are key reasons for the development of drug-resistant TB.

## 5.2. Herbal treatment

The most commonly used herbs for the treatment of TB include: *Albizia lebbek* (stem bark); *Cassia sieberiana* (stem bark); *Zanthoxylum xanthoxyloides* (stem bark)

## 6. Prevention and control

Bacille Calmette Guérin (BCG), derived from an atypical Mycobacterium, but offers some protection from developing active tuberculosis, is a vaccine given throughout many parts of the world, especially in infants and children.

Other preventative measures include:

- Referrals to specialist/TB clinics to avoid spread of the disease
- Cover mouth and nose with a tissue when coughing,
- Avoid spitting
- Spit in a box with a lid containing bleach
- Empty the contents every night in the toilet
- Do not use the other covered during the treatment
- Sleep alone if possible during the first month of treatment in a well ventilated room
- Do not consume alcohol or tobacco

## 7. References

Tuberculose, Wikipédia

- Guide de formation des ASC sur la prise en charge de la tuberculose, PNLT, Côte d'Ivoire
- Méthode FAPEG, PROMETRA
- Health Encyclopedia - Diseases and Conditions.
- <http://www.healthscout.com/nav/ency/1/main.html>

## N° 4: MALARIA

### 1. Description

Malaria is an infectious disease caused by the *Plasmodium* parasite, which infects red blood cells. The term "mal aria" (meaning "bad air" in Italian) was first coined in 1740 by H. Walpole when describing the disease, and was shortened to "malaria" in the 20th century. Malaria can be life-threatening, and is usually characterized by cycles of chills, fever, pain, and sweating. Currently, about 2 million deaths per year worldwide are due to *Plasmodium* infections. The majority occur in children under 5 years of age in sub-Saharan African countries. There are about 400 million new cases per year worldwide. Plasmodium is transmitted to humans by the bite of the female Anopheles mosquito. Mosquitoes breed in stagnant water.

### 2. Causes

Four common species of the parasite cause malaria, but the most serious type is *Plasmodium falciparum*, which causes 80% of cases and 90% of deaths. However, another relatively new species, *Plasmodium knowlesi*, is also dangerous and is typically found only in long-tailed and pigtail macaque monkeys. The other three common species of malaria (*P. vivax*, *P. malariae*, and *P. ovale*) are generally less serious and are usually not life-threatening.

### 3. Signs and symptoms

The symptoms characteristic of malaria include:

- Flulike illness with cycles of chills, fever, and sweating that repeat every one, two, or three days
- Muscle ache ; headache ; nausea, repeated vomiting
- Lack of appetite, coughing, diarrhoea and yellowing (jaundice) of the skin and whites of the eyes due to destruction of red blood cells and liver cells
- Inability to drink or breastfeed
- Convulsions, lethargy, severe pallor, difficulty breathing
- Dark coloured urine

People with severe *P. falciparum* malaria can develop bleeding problems, shock, liver or kidney failure, central nervous system problems, coma, and can die from the infection or its complications. Cerebral malaria (coma, or altered mental status or seizures) can occur with severe *P. falciparum* infection. It is life-threatening if not treated quickly; even with treatment, about 15%-20% die.

### 4. Investigations

- Blood smear on a microscope slide that is stained (Giemsa stain) to show the parasites inside red blood cells-classic and most used diagnostic test
- Other tests based on immunologic principles exist; including RDTs (rapid diagnostic tests) and polymerase chain reaction (PCR) tests
- Detailed consultation to elicit onset the first signs, progression of the signs and treatments received (including traditional)
- Physical examination for the following: temperature, weight, height and blood pressure for adults.

### 5. Treatment

#### 5.1. Modern

Three main factors determine treatments: the infecting species of *Plasmodium* parasite, the clinical situation of the patient (e.g. adult, child, or pregnant female with either mild or severe malaria), and the drug susceptibility of the infecting parasites (different areas of the world have malaria types that are resistant to certain medications)

- Chloroquine phosphate (Aralen) is the drug of choice for all malarial parasites except for chloroquine-resistant *Plasmodium* strains

- Multiple drug-treatment protocols for treatment of drug-resistant *Plasmodium* strains (for example, quinine sulfate plus doxycycline [Vibramycin, Oracea, Adoxa, Atridox] or tetracycline [Achromycin], or clindamycin [Cleocin], or atovaquone-proguanil [Malarone])
- The WHO's treatment policy, recently established in 2006, is to treat all cases of uncomplicated *P. falciparum* malaria with artemisinin-derived combination therapy (ACTs). ACTs are drug combinations (for example, artesunate-amodiaquine, artesunate-mefloquine, artesunate-pyronaridine, dihydroartemisinin-piperaquine, and chlorproguanil-dapsoneartesunate) used to treat drug-resistant *P. falciparum*. Unfortunately, as of 2009, a number of *P. falciparum*-infected individuals have parasites resistant to ACT drugs.

## 5.2. Herbal treatment

In many countries category I and II herbal medicines are approved and even on the list of essential medicines for the treatment of uncomplicated malaria. Some of the plants commonly used in the preparation of these medicines are part of the WHO monographs: *Moringa lucida* (stem bark), *Guiera senegalensis*, *Senna occidentalis* (leaves), *Tinospora baki*, *Combretum micranthum*, *Khaya senegalensis* (inner bark), *Carica papaya*, *Crysopterix febrifuga*; *Cryptolepis sanguinolenta* (root); *Moringa oleifera* (leaves); *Cymbopogon citratus* (leaves); *Cassia alata* (leaves); *Psidium guajava* (leaves)

## 6. Prevention and control

The goals of prevention are:

- Avoid contact with mosquitoes. Thus the use of nets designed to repel or kill mosquitoes and;
- Prevent mosquito breeding in the immediate environment
- Reduce the susceptibility of vulnerable people being infected by mosquitoes
- Avoid traveling in areas of known malaria outbreaks
- Wear appropriate clothing: travelers can minimize areas of exposed skin by wearing long-sleeved shirts, long pants, boots, and hats. Tucking in shirts and wearing socks and closed shoes instead of sandals may reduce risk.
- Insecticides: aerosol insecticides, vaporizing mats, and mosquito coils can help to clear rooms or areas of mosquitoes; however, some products available internationally may contain pesticides that are not registered in the United States. Insecticides should always be used with caution, avoiding direct inhalation of spray or smoke.
- Apply repellents (containing up to 50% DEET (N,N-diethyl-m-toluamide) to clothing and gear

## 7. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

### **1. Description**

Diabetes is a chronic condition characterized by persistent high levels of sugar (glucose) in the blood. It is caused by multiple genetic and environmental factors that result from defects in insulin secretion, or its action or both. Insulin lowers the blood glucose level. As a result, absence or insufficient production of insulin causes diabetes. Elevated levels of blood glucose (hyperglycaemia) lead to spillage of glucose into the urine, hence the term “sweet urine”. According to the World Health Organization, an estimated seven million Africans suffer from the disease, which is now ranked as the fourth leading cause of death in most developing countries.

The two types of diabetes are referred to as type 1 and type 2. Former names for these conditions were insulin-dependent and non-insulin-dependent diabetes, or juvenile onset and adult onset diabetes. Type II Diabetes is increasing and is a major public health concern. It is increasing in line with increasing life expectancy, urbanization, sedentary lifestyle and obesity development.

### **2. Causes**

Diabetes is due to insufficient or total lack and/or dysfunction of insulin in the blood. Three common forms of diabetes are known:

- Type 1 diabetes (formerly called insulin-dependent diabetes mellitus): juvenile onset;
- Type 2 diabetes (formerly called non-insulin diabetes dependent): onset in adulthood;
- Gestational diabetes (diabetes that occurs during pregnancy in cases before non-diabetics)

### **3. Signs and symptoms**

Symptoms of diabetes include increased urine output, thirst, hunger, and fatigue.

The number of people seeking medical care for diabetes is increasing in Africa at a time when health experts are overloaded, health care systems are ill-equipped to diagnose the disease and the majority of the poor cannot afford the cost of treatment. Many patients with diabetes have no symptoms. Their diabetes is only detected by the test. Patients may present with the following symptoms:

- Polyuria (passing large amounts of urine);
- Polydipsia (thirst and excessive consumption of alcohol and water)
- Polyphagia
- Recurrent boils
- Pruritus vulvae
- Nocturia

The risk factors are: sedentary lifestyle, obesity, genetic factors/family history, pregnancy, hypertension, drug therapy - hormonal/contraceptive, diet, age, etc.

### **Complications**

The major complications of diabetes are both acute and chronic.

- Acute complications: dangerously elevated blood sugar (hyperglycemia), abnormally low blood sugar (hypoglycemia) due to diabetes medications leading to dizziness, confusion, weakness and tremors; severe nausea, vomiting, abdominal pain, diabetic ketoacidosis leading to shock, coma, or death. Abnormally low blood sugar due to excessive levels of insulin or other hypoglycemic drugs causes
- Chronic complications: disease of the blood vessels (both small and large) which can damage the feet, eyes, kidneys, nerves, and heart (e.g. impotence, foot gangrene/ulcer, poor vision, heart attack, infertility, obese children, miscarriages, kidney failure).

Over time, diabetes can lead to blindness, kidney failure, and nerve damage. These types of damage are the result of damage to small vessels, referred to as microvascular disease.

Diabetes is also an important factor in accelerating the hardening and narrowing of the arteries (atherosclerosis), leading to strokes, coronary heart disease, and other large blood vessel diseases. This is referred to as macrovascular disease.

#### 4. Investigations

- a) **Fasting blood glucose (sugar) test**- preferred way to diagnose diabetes; easy to perform and convenient. After the person has fasted overnight (at least 8 hours), a single sample of blood is drawn and sent to the laboratory for analysis.
- Normal fasting plasma glucose levels are less than 100 milligrams per deciliter (mg/dl).
  - Fasting plasma glucose levels of more than 126 mg/dl on two or more tests on different days indicate diabetes.
  - A random blood glucose test can also be used to diagnose diabetes. A blood glucose level of 200 mg/dl or higher indicates diabetes.
- b) Oral glucose tolerance test (OGTT)- though not routinely used anymore, it is a gold standard for making the diagnosis of type 2 diabetes and also gestational diabetes and in conditions of pre-diabetes, such as polycystic ovary syndrome. Glucose tolerance tests may lead to one of the following diagnoses:
- **Normal response:** A person is said to have a normal response when the 2-hour glucose level is less than 140 mg/dl, and all values between 0 and 2 hours are less than 200 mg/dl.
  - **Impaired glucose tolerance:** A person is said to have impaired glucose tolerance when the fasting plasma glucose is less than 126 mg/dl and the 2-hour glucose level is between 140 and 199 mg/dl.
  - **Diabetes:** A person has diabetes when two diagnostic tests done on different days show that the blood glucose level is high.
  - **Gestational diabetes:** A pregnant woman has gestational diabetes when she has any two of the following: a fasting plasma glucose of 92 mg/dl or more, a 1-hour glucose level of 180 mg/dl or more, or a 2-hour glucose level of 153 mg/dl, or more.

#### 5. Treatment

An important goal of diabetes treatment is to keep the blood glucose levels near the normal range of 70-120 mg/dl before meals and under 140 mg/dl at two hours after eating. Diabetes treatment depends on the type and severity of the diabetes. Type 1 diabetes is treated with insulin, exercise, and a diabetic diet. Type 2 diabetes is first treated with weight reduction, a diabetic diet, and exercise. When these measures fail to control the elevated blood sugars, oral medications are used. If oral medications are still insufficient, insulin medications and other injectable medications are considered.

##### 5.1. Modern

Non-pharmacological: in patients with type 2 diabetes, diet should be tried first.

Diet: all patients with diabetes need diet therapy. In general, patients should avoid soft drinks, alcohol, tobacco, dates, sugar cane, pineapple, plantain, condensed milk, pastries, croissants, ice cream, honey, etc.. Feeding a day should consist of carbohydrates (60%), protein (15%) and fat (25%), mainly of plant origin.

Exercise: do simple exercises (walking 45 minutes to an hour per day) is useful to ensure good glycaemic control. Any advice on exercise should take into account the patient's age and the presence of complications and other medical conditions.

## 5.2. Herbal treatment

*Mangifera indica*, *Momodica charantia*, *Psidium guajava*, *Anthocleista nobilis*, *Desmodium adscendens*, *Vernonia amygdalina*, *Lippia multiflora*, *Nauclea latifolia*, *Tetrapleura tetraptera*, *Catharantus roseus*, *Bridelia ferruginea*, *Sclerocarya birrea*, *Moringa oleifera*, etc.

## 6. Prevention and control

Preventative measures will help prevent the chronic complications of diabetes.

- Maintain a steady weight-get as close to your ideal weight as possible; more than 80 percent of people with type 2 diabetes are overweight.
- Undertake regular exercise in your schedule-working out regularly, at least four hours a week, can significantly lower your risk for diabetes.
- Avoid diets high in saturated fat (animal products)-can raise the LDL (bad) levels of cholesterol in your body
- Don't overeat on a regular basis
- Increase intake of fiber

## 7. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## **N° 6: ARTERIAL HYPERTENSION**

### **1. Description**

Hypertension is a condition in which the blood pressure of an adult aged 18 or over is consistently higher than 140/90 mm Hg in a non-diabetic, or above 130/80 mm Hg in a diabetic. Hypertension leads to an increased risk of damage to blood vessels in the eye, thickening of the heart muscle and heart attacks, hardening of the arteries (arteriosclerosis), kidney failure, and strokes and early death, if it is not properly controlled. Once the diagnosis of hypertension is made, the individual must be monitored regularly and treated for life. In Africa, hypertension is a public health problem with an average incidence of 15 to 40%. The average incidence of hypertension in West Africa is 16% in adults, ranging from 3 to 30%, from rural to urban areas. In Ghana, it is 4.5% in rural and 13% in urban areas. In Guinea, the prevalence is 43.6% in urban and 14.9% in rural areas, whilst in Senegal it is 25% and 23.7% in rural Mali. High blood pressure is called "the silent killer" because it often causes no symptoms for many years, even decades, until it finally damages certain critical organs. High blood pressure in pregnancy can lead to preeclampsia or eclampsia (toxemia of pregnancy). Pregnant women should be monitored closely by their obstetrician for complications of high blood pressure.

### **2. Causes**

Genetic factors (approximately 30%) are thought to play a prominent role in the development of essential hypertension.

Risk factors are increasing age, family history, obesity, excessive alcohol consumption, smoking, type 1 or type 2 diabetes, kidney disease, sedentary lifestyle/lack of exercise, steroids/contraceptives, etc. High salt intake, obesity, lack of regular exercise, excessive alcohol or coffee intake, and smoking may all adversely affect the health of an individual with high blood pressure

### **3. Signs and symptoms**

Most patients with uncomplicated hypertension may have no symptoms. Some people with uncomplicated hypertension, however, may experience symptoms such as headache (which do not respond to analgesics), tinnitus, palpitation, dizziness, shortness of breath, and blurred vision usually with blood pressure that is very high. About 1% of people with hypertension is diagnosed with severe high blood pressure (accelerated or malignant hypertension) at their first visit to the doctor. In these patients, the diastolic blood pressure exceeds 140 mm Hg. Affected persons often experience severe headache, nausea, visual symptoms, dizziness, and sometimes kidney failure. Malignant hypertension is a medical emergency and requires urgent treatment to prevent a stroke (brain damage).

Complications are: atherosclerosis (narrowing of the arteries), stroke (bleeding or blood clot in the brain), aneurysm (dangerous extension of the main artery or in the chest or abdomen, which weakens and can break) heart attack, heart failure (reduced pumping capacity - pedal edema), renal failure - periorbital edema, eye injuries, etc.

### **4. Investigations**

Measurement of blood pressure.

### **5. Treatment**

Most antihypertensive medications can be used alone or in combination. Some are used only in combination. Some are preferred over others in certain specific medical situations. And some are not to be used (contraindicated) in other situations.

- Several classes of antihypertensive medications are available, including ACE inhibitors, ARB drugs, beta-blockers, diuretics, calcium channel blockers, alpha-blockers, and peripheral vasodilators.

- The goal of therapy for hypertension is to bring the blood pressure down below 140/85 in the general population and to even lower levels in diabetics, African Americans, and people with certain chronic kidney diseases.

### **5.1. Modern**

Lifestyle changes in diet and exercise and compliance with medication regimes contribute significantly to the reduction of blood pressure: low salt intake, low fat intake, weight reduction in obese and overweight people, regular exercise among sedentary patients, reducing alcohol consumption and smoking, stress management. These lifestyle changes must be pursued even when treatment is completed.

### **5.2. Herbal treatment**

Common plants used are: *Rauwolfia vomitoria*, *Bridelia feruginea*, *Ceiba pentandra*, *Allium sativum*, *Persia americana*, *Lippia multiflora*, *Taraxacum officinalis*, *Cassia occidentalis*, *Desmodium adscendens*

## **6. Prevention and control**

Prevention and control measures should aim at:

- Recognizing the signs and symptoms of hypertension;
- Identifying the two forms of hypertension;
- Recognizing the complications of hypertension;
- Recognizing the relationship between hypertension, diabetes and hypercholesterolemia.

Each middle-aged person of over 40 years should know his/her height, weight, blood pressure, blood sugar and cholesterol. They should also make regular blood pressure tests if there is a familial tendency to hypertension. In this way, treatment can be started before any complications.

Adjustments in the following lifestyle habits are necessary:

- Lose weight
- Exercise regularly
- Reduce alcohol consumption
- Adopt a balanced diet
- Reduce stress by trying different relaxation techniques, or avoid stressful situations.

## **7. Reference**

Health Encyclopedia - Diseases and Conditions  
<http://www.healthscout.com/nav/ency/1/main.html>

## **N° 7: ASTHMA**

### **1. Description**

Asthma is a chronic disease characterized by inflammation of the bronchial tubes (airways) that causes swelling and narrowing (constriction) of the airways. The result is difficulty breathing. Asthma attacks may be interspersed with periods where breathing is normal. In some people, however, asthma may induce permanent respiratory discomfort that interferes with daily activities. In sensitive individuals, the bronchial tubes are more likely to swell and constrict when exposed to triggers such as allergens, tobacco smoke, or exercise.

### **2. Causes**

The causes of asthma are not well known, although both genetic and environmental factors are thought to be implicated. The following factors may contribute to trigger an asthma attack or aggravate respiratory problems, but they are not the cause of asthma. The risk factors are:

- Airborne allergens (dust, pollen, pet dander, dust mites)
- Air pollutants (irritants in the workplace, fire smoke, exhaust fumes, air pollution, etc.)
- Tobacco smoke
- Foods (food allergies) or food additives
- Certain drugs (aspirin and other nonsteroidal anti-inflammatory drugs, beta-blockers used for heart problems or high blood pressure)
- Respiratory infections (colds, bronchitis, sinusitis, etc.). Because they cause inflammation
- Exercise, especially if practiced outside in winter, cold weather and dry
- Strong emotions (laughter, tears, anger, excitement), especially in children;

### **3. Signs and symptoms**

Symptoms may be intermittent or persistent. They may occur after exercise or in the presence of another trigger, and they are usually worse at night and early morning. The following are the four major recognized asthma symptoms:

- Shortness of breath, especially with exertion or at night
- Wheezing is a whistling or hissing sound when breathing out
- Coughing may be chronic, is usually worse at night and early morning, and may occur after exercise or when exposed to cold, dry air
- Chest tightness may occur with or without the above symptoms

The above symptoms may be accompanied by:

- Sweating
- Increase in heart rate
- Difficulty speaking or coughing
- High anxiety, confusion and restlessness (especially in children)
- Bluish fingers or lips

### **4. Investigations**

Asthma is usually diagnosed based on the presence of wheezing and confirmed with breathing tests.

- Spirometry (lung function test)
- Endurance test (if test show normal lung function despite the problems described by the patient),

Chest X-rays are usually normal in asthma patients.

### **5. Treatment**

The treatment of asthma is based on three pillars: avoid inhalation of allergens, treatment of airway inflammation and bronchial constriction treatment.

- Most asthma medications work by relaxing bronchospasm (bronchodilators) or reducing inflammation (corticosteroids).

- Inhaled medications include beta-2 agonists, anticholinergics, corticosteroids, and cromolyn sodium. Oral medications include aminophylline, leukotriene antagonists, beta-2 agonists, and corticosteroid tablets

## 5. Herbal treatment

- *Abrus precatorius* (leaves) and *Euphorbia hirta* with honey
- *Allium sativum* (bulb) and *Zingiber officinale* (rhizome) with honey
- *Abrus precatorius* (leaves), *Euphorbia hirta* (leaves) and *Tetrapluera tetraptera* (fruit)
- Other are Boswellia, Lobelia, Gingko biloba
- Magnesium
- Combination of vitamins C and E
- Buteyko Method
- Dietary advice: Foods rich in quercetin, chiropractic, homeopathy, fish oils, autogenic training, vitamin C, pycnogenol
- Exercise: Yoga and psychotherapy

## 6. Prevention and control

Avoiding precipitating factors is important in the management of asthma.

General measures to prevent asthma include:

- Develop an action plan with the doctor to identify the factors (e.g. allergies, activities, behaviours, etc.) that cause crises in order to avoid them
  - Be alert to precipitating signs in order to quickly act
  - Avoid exposure to moisture, animals, pollen and other respiratory irritants
  - Avoid exposure to tobacco smoke.
- Exercise; make time for relaxation.

## 7. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## N° 8: AZOOSPERMIA

### 1. Description

Azoospermia refers to the complete absence of sperm in the semen during ejaculation. Azoospermia affects about 1% of men, in whom it is the cause of infertility. It must be differentiated from oligospermia which is defined as a small amount of sperm in the semen and asthenospermia, which is inadequate sperm motility.

There are two types of azoospermia:

- Excretory azoospermia: usually due to an infectious disease of the reproductive system, inflammation or surgery performed in the groin area. In this case, the sperm are quite normal but can not migrate to the seminal vesicles.
- Secretory azoospermia: the formation of spermatozoa is either incomplete or impossible.

### 2. Causes

The causes of azoospermia are:

- Cancer treatment;
- Epididymo-orchitis (inflammation of the testes and epididymis)
- Klinefelter's syndrome (presence of an extra X chromosome)
- Cryptorchidism (testicle remains in the abdomen)
- Cystic fibrosis (too high viscosity of bronchial secretions and digestive)

Diseases commonly encountered in the epididymis in order of frequency of occurrence, are:

- Epididymal agenesis, a congenital incomplete development of the epididymis
- Inflammation of the epididymis, also called epididymitis, which is almost always associated with inflammation of the testicle
- Cyst of the epididymis
- Epididymectomy-removal of all or part of the epididymis

### 3. Signs and symptoms

Usually asymptomatic, but may be confirmed with testicular biopsy. The main complication is male infertility.

### 4. Treatment

#### 4.1. Pharmacologic

The treatment of secretory azoospermia is impossible for the moment.

- Modern treatment
- Herbal treatment

#### 4.2. Herbal treatment

- *Saba camorensis* (stem bark), *Entandrophragma angolensis* (leaves) and *Cyperus esculentus* (root).
- Dietary advice
- Exercise
- Psychotherapy

### 5. Prevention and control

Treat all urinary tract infections

### 6. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## **N° 9: GALLSTONES**

### **1. Description**

Gallstones are "stones" that form in the gallbladder or bile ducts. The common types of gallstones are cholesterol, black pigment, and brown pigment. Cholesterol gallstones occur more frequently in several ethnic groups and are associated with female gender, obesity, pregnancy, oral hormonal therapy, rapid loss of weight, elevated blood triglyceride levels, and Crohn's disease. Black pigment gallstones occur due to increased destruction of red blood cells, whereas brown pigment gallstones occur when bile flow is slowed. The risk of gallstones increases with age, probably due to the decreased efficiency of the contractions of the gallbladder.

### **2. Causes**

Bile is composed mostly of water, bile salts, cholesterol, phospholipids, pigments and electrolytes. Gallstones form when cholesterol:

- a) Bile contains too much cholesterol;
- b) Bile does not contain sufficient bile salts;
- c) Gallbladder does not contract regularly (the gallbladder is then called "lazy").

The risk factors for developing cholesterol gallstones include:

- Gender-gallstones occur more commonly in women than men.
- Age-gallstone prevalence increases with age.
- Obesity-obese individuals are more likely to form gallstones than thin individuals.
- Pregnancy-pregnancy increases the risk for cholesterol gallstones because during pregnancy, bile contains more cholesterol, and the gallbladder does not contract normally.
- Birth control pills and hormone therapy-the increased levels of hormones caused by either treatment mimics pregnancy
- Rapid weight loss-rapid weight loss by whatever means, very low calorie diets or obesity surgery, causes cholesterol gallstones in up to 50% of individuals
- Crohn's disease-individuals with Crohn's disease of the terminal ileum are more likely to develop gallstones. Gallstones form because patients with Crohn's disease lack enough bile acids to solubilize the cholesterol in bile
- Increased blood triglycerides-gallstones occur more frequently in individuals with elevated blood triglyceride levels

### **3. Signs and symptoms**

In the vast majority of cases gallstones do not cause symptoms. The most common symptoms of gallstones are biliary colic (usually lasts from 30 minutes to 4 hours) and cholecystitis, an intense and sustained pain felt in the middle or upper right abdomen. Sometimes the pain radiates to the shoulder blade, nausea and vomiting. Gallstones do not cause intolerance to fatty foods, belching, abdominal distention, or gas.

In most cases, gallstones do not cause complications, but untreated it can lead to situations that would be life threatening. Complications of gallstones include acute cholecystitis (inflammation of the gallbladder), acute cholangitis (inflammation of the bile ducts) or acute pancreatitis (inflammation of the pancreas), gangrene, jaundice, sepsis, fistula, and ileus. Gallbladder sludge is associated with symptoms and complications of gallstones;

### **4. Treatment**

#### **4.1. Pharmacologic**

**Modern treatment** (medical, surgical, ultrasound)

Gallstones are managed primarily with observation (no treatment) or removal of the gallbladder (cholecystectomy). Less commonly used treatments include sphincterotomy and

extraction of gallstones, dissolution with oral medications, and extra-corporeal shock-wave lithotripsy (ESWL).

#### **Herbal treatment**

- Artichoke, combination of essential oil of peppermint and caraway
- Boldo, milk thistle, turmeric, peppermint (leaf), dandelion
- Dietary advice
- Intake of olive oil

#### **5. Prevention and control**

- Maintain a normal weight
- Regular exercise
- Eat good "fat", especially polyunsaturated fats and monounsaturated fats lower risk of gallstones. The main sources of these "fats" are vegetable oils, nuts and seeds
- Eat fiber
- Limit the intake of sugars (carbohydrates), especially those with high glycemic index

#### **6. Verification**

The best single test for diagnosing gallstones is transabdominal ultrasonography. Other tests include endoscopic ultrasonography, magnetic resonance cholangio-pancreatography (MRCP), cholescintigraphy (HIDA scan), endoscopic retrograde cholangio-pancreatography (ERCP), liver and pancreatic blood tests, duodenal drainage, oral cholecystogram (OCG), and intravenous cholangiogram (IVC).

#### **7. References**

Health Encyclopedia - Diseases and Conditions.

<http://www.healthscout.com/nav/ency/1/main.html>

[http://www.passeportsante.net/fr/Maux/Problemes/Fiche.aspx?doc=lithiase\\_biliaire\\_pm#P586051](http://www.passeportsante.net/fr/Maux/Problemes/Fiche.aspx?doc=lithiase_biliaire_pm#P586051).

## **N° 10: KIDNEY STONES**

### **1. Description**

Kidney stones, also called renal stones or nephrolithiasis are hard, crystalline mineral materials formed within the kidney or urinary tract. Kidney stones are a common cause of blood in the urine (haematuria) and often severe pain in the abdomen, flank, or groin. Kidney stones are sometimes called renal calculi.

### **2. Causes**

Kidney stones form when there is a decrease in urine volume and/or an excess of stone-forming substances in the urine. The main risk factors include:

- Dehydration
- Certain medications (diuretics such as triamterene, antacids containing calcium, sulfonamides and some antiviral drugs such as indinavir), or supplements
- Diet very rich in salt or sugar
- Diet containing excess protein or deficient in calcium
- Genetic disease (cystic fibrosis)
- Metabolic disease (diabetes)
- Urinary tract malformations (especially in children)
- Family history of kidney stones (more common in Asians and Caucasians than in Native Americans, Africans, or African Americans)
- People with certain medical conditions, such as gout
- Some pregnant women

Possible complications include:

- Sepsis related to infection and secondary to obstruction of a ureter by a calculus;
- Colic in a patient with only one kidney

### **3. Signs and symptoms**

The main signs and symptoms include:

- Flank pain (sudden and intense pain in the back (one side of the trunk, under the ribs)
- Nausea and vomiting
- Blood in the urine or cloudy urine
- Sometimes an urge to urinate and frequent
- Burning sensation during urination and frequency (in case of concomitant urinary tract infection)
- Fever and chills

### **4. Investigations**

- Diagnosis of kidney stones is best done with a computed tomography (CT) of the kidneys, ureters and bladder
- Also urinalysis to check for blood and crystals in the urine, and to determine its pH

### **5. Treatment**

#### **5.1. Modern treatment**

With time, most kidney stones will pass through the ureter to the bladder on their own. Treatment includes pain control medications and, in some cases, medications to facilitate the passage of urine. Where necessary, lithotripsy or surgical techniques may be used for stones which do not pass through the ureter to the bladder on their own.

#### **5.2. Herbal treatment and Supplementation**

- Prevention: asparagus, nettles, parsley, dandelion, goldenrod
  - Treatment: nettle, parsley, horsetail, goldenrod, butterbur, magnesium, pumpkin seeds, fish oils, vitamin B6 prevention
- Dietary advice

## 6. Prevention and control

- Preventive measures are intended primarily for those at risk or those who have had kidney stones. Measures to reduce the risk or prevent recurrences:
- Drink enough: the best way to prevent kidney stones is to drink at least 2 liters of water or other beverages every day (juices, soups, coffee, etc.). Attention! It is best not to drink grapefruit juice
- Reduce intake of foods rich in oxalate (spinach, rhubarb, beets, chard, peanuts, chocolate, tea, wheat germ, okra, sweet potatoes and soybeans)
- Ensure good dietary intake of calcium
- Eat foods rich in potassium: potatoes (with skin), cantaloupe, avocado, lima beans and bananas
- Eat enough fiber
- Medications: to prevent recurrence of stones, various medications or supplements that vary depending on the type of calculation (thiazide diuretics, allopurinol, potassium citrate, etc.) may be prescribed

NB:

- Prolonged use of high doses of vitamin D can cause kidney stones;
- Long-term intake of high doses of vitamin C contributes to the formation of kidney stones. The recommended dose to benefit from the antioxidant effect of vitamin C is 500 mg per day

## 7. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## **N° 11: LIVER CIRRHOSIS**

### **1. Description**

Cirrhosis is an irreversible liver disease characterized by progressive scarring that disrupts the liver's normal lobular architecture and nodule formation. This leads to three major effects:

- Hepatic insufficiency- functional deficit related to the decrease in the number of hepatocytes and poor quality of vascularization;
- Portal hypertension-cause gastrointestinal bleeding;
- Precancerous condition: the development of carcinoma after 15-20 years of evolution

Cirrhosis can cause yellowing of the skin (jaundice), itching, and fatigue.

### **2. Causes**

There are many causes of cirrhosis, which include:

- Chemicals (such as alcohol, fat, and certain medications), viruses, toxic metals (such as iron and copper that accumulate in the liver as a result of genetic diseases)
- Chronic hepatitis C: 15 to 25% of cases;
- Chronic hepatitis B: 5% of cases
- Other causes: 5% of cases (hemochromatosis, primary biliary cirrhosis, autoimmune hepatitis, Wilson's disease, alpha 1 antitrypsin deficiency, secondary biliary cirrhosis, etc.)

### **3. Signs and symptoms**

Patients with cirrhosis may have few or no symptoms and signs of liver disease. Some of the symptoms may be nonspecific, and may not suggest that the liver is their cause. Some of the more common symptoms and signs of cirrhosis include:

- Increase in size of the liver (hepatomegaly) with a hard consistency
- Signs of liver failure such as jaundice, spider naevi, palmar and plantar erythema (very red palms), foul odor of the breath, flapping tremor
- Yellowing of the skin (jaundice) due to the accumulation of bilirubin in the blood
- Fatigue
- Weakness
- Loss of appetite
- Itching
- Easy bruising from decreased production of blood clotting factors by the diseased liver.
- Signs of portal hypertension: splenomegaly (enlarged spleen),

Complications of cirrhosis include mental confusion, coma, fluid accumulation (ascites), internal bleeding, hepatic encephalopathy, jaundice and kidney failure.

### **4. Investigations**

Diagnosis is suggested by physical examination and blood tests, and it can be confirmed by liver biopsy.

- Liver function test
- Abdominal ultrasound
- Endoscopy of the Upper GI tract

### **5. Treatment**

#### **5.1. Pharmacologic**

There is no cure for cirrhosis, but early treatment can prevent the development of complications. Treatment includes 1) preventing further damage to the liver, 2) treating the complications of cirrhosis, 3) preventing liver cancer or detecting it early, and 4) liver transplantation.

## Modern

- Suppress the immune system with drugs such as prednisone and azathioprine to decrease inflammation of the liver in autoimmune hepatitis.
- Treat patients with a bile acid preparation, ursodeoxycholic acid. Other medications such as colchicine and methotrexate also may have benefit in subsets of patients with PBC.

## Herbal treatment

- *Viscum album* (leaves), *Mangifera indica* (leaves), *Anthocleista nobilis* (leaves), *Phyllanthus fraternus* (leaves)
- Dietary advice

## 6. Prevention and control

- Consume a balanced diet and one take multivitamin daily
- Avoid drugs (including alcohol) that cause liver damage
- Avoid nonsteroidal antiinflammatory drugs (NSAIDs, e.g., ibuprofen)
- Eradicate hepatitis B and hepatitis C virus by using anti-viral medications
- Remove blood from patients with hemochromatosis to reduce the levels of iron and prevent further damage to the liver. In Wilson's disease, medications can be used to increase the excretion of copper in the urine to reduce the levels of copper in the body and prevent further damage to the liver.
- Immunize patients with cirrhosis against infection with hepatitis A and B to prevent a serious deterioration in liver function

## 7. References

<http://sante-guerir.notrefamille.com/sante-a-z/cirrhoses-du-foie/cirrhose-prevention-et-traitement-o73392.html>

Health Encyclopedia - Diseases and Conditions.

<http://www.healthscout.com/nav/ency/1/main.html>

## N° 12: ERECTILE DYSFUNCTION

### 1. Description

Erectile dysfunction (ED), also known as impotence, is the repeated inability to achieve or sustain an erection for satisfactory sexual activity over a period of at least three months. It varies in severity thus:

- Recurring difficulty or inability to achieve erection;
- Getting an erection but with a penis that is not firm enough for penetration;
- Inability to maintain a satisfactory erection after penetration;

It is more common in men over 50 years, but can occur at the end of adolescence. The risk of erectile dysfunction increases with age. The ability to achieve and sustain erections requires

- a healthy nervous system
- healthy arteries in and near the corpora cavernosa,
- healthy smooth muscles and fibrous tissues within the corpora cavernosa,
- adequate levels of nitric oxide in the penis.

### 2. Causes

The following are causes of erectile dysfunction:

- Aging
- Diseases (e.g. hypertension; atherosclerosis, Diabetes mellitus)
- Cigarette smoking-aggravates atherosclerosis
- Nerve or spinal chord damage
- Substance abuse (e.g. marijuana, heroin, cocaine, methamphetamines, crystal meth, and alcohol)
- Low testosterone levels
- Medications (e.g. antihistamines, antidepressants, tranquilizers, and appetite suppressants)
- Depression and anxiety

### 3. Signs and symptoms

- Inability to achieve an erection;
- Lack of stiffness which does not allow adequate penetration

### 4. Investigations

- Candid communication between the patient and the doctor
- Physical examination
- Lab tests (complete blood counts, urinalysis, lipid profile, blood glucose levels, serum creatinine, liver enzymes and liver function tests, total testosterone levels, PSA levels, etc.)
- Imaging tests
- Prostaglandin E1 injection test

### 5. Treatment

#### 5.1. Pharmacologic

- Making life style changes (e.g. quitting smoking and exercising more)
- Taking drugs such as sildenafil (Viagra), vardenafil (Levitra) or tadalafil (Cialis)
- Inserting medications into the urethra (intraurethral suppositories)
- Injecting medications into the corpora cavernosae (intracavernosal injections)
- Vacuum constrictive devices for the penis
- Penile prostheses

#### Herbal treatment

- *Mondia whitei* (root), *Sphenocentrum jollyanum* (root), *Paullinia pinnata* (root) and *Sida acuta* (root)

- *Cissus populnea* (stem), *Paullinia pinnata* (root), *Mondia whitei* (root) and *Zea mays* (silk)
- *Mondia whitei* (root), *Sphenocentrum jollyanum* (root), *Paullinia pinnata* (root), *Bombax buonopozense* (stem)
- *Aframomum melegueta* (seed), *Hymenocardia acida* (leaves), *Zanthoxylum xanthozyloides* (stem bark) and *Zingiber officinale* (rhizome)

## 6. Complications

None

## 7. Prevention and control

- Limit alcohol consumption.
- Quit smoking.
- Exercise regularly
- Lose excess weight
- Curtail excessive alcohol consumption
- Control hypertension
- Optimize blood glucose levels in patients with diabetes
- Relaxation
- Get enough sleep
- Adopt a healthy lifestyle
- Eat healthy foods

## 8. Références

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## N° 13: GONORRHOEA

### 1. Description

Gonorrhoea, commonly known as "the clap" is a sexually transmitted infection (STI) caused by the bacterium *Neisseria gonorrhoeae*. It occurs more often in men than women. Men aged 20-24 years and young women aged 15 to 19 are the most affected. It can infect the penis, vagina, urethra, rectum, throat and sometimes the eyes. In women, the cervix may also be damaged.

Men with gonorrhoea may have a yellowish discharge from the penis accompanied by itching and burning. More than half of women with gonorrhoea do not have any symptoms.

### 2. Causes

Gonorrhoea is spread during unprotected anal or vaginal sex with an infected partner, through the exchange of bodily fluids and contact with mucous membranes. It is rarely transmitted by oral sex. It can also be transmitted from an infected mother to an infant during delivery, causing eye infection.

### 3. Signs and symptoms

Symptoms usually appear 2 to 5 days after the time of infection, but they can take up to 30 days before being noticed. Symptoms may include burning or frequent urination, yellowish vaginal discharge, redness and swelling of the genitals, and a burning or itching of the vaginal area.

Men: some men have little or none of these symptoms:

- tingling or urethral discharge;
- burning on urination;
- pain or swelling in the testicles;
- pain or discharge from the rectum.

Women: many women have no symptoms:

- burning sensation during urination;
- yellowish vaginal discharge, or sometimes bloody;
- Abnormal vaginal bleeding;
- Lower abdominal pain;
- Pain during intercourse.

If untreated, gonorrhoea can lead to severe pelvic infections and even sterility. Complications in later life can include inflammation of the heart valves, arthritis, and eye infections.

- In **women**, gonorrhoea can cause pelvic inflammatory disease, infertility, chronic pelvic pain or increase the risk of ectopic pregnancy.
- In **men**, gonorrhoea can cause inflammation of the prostate (prostatitis) or testicles (epididymitis), which can cause infertility.

Gonorrhoea also increases the risk of HIV transmission.

### 4. Investigations

Urethral or vaginal sampling with culture and susceptibility testing

### 5. Treatment

#### 5.1. Pharmacologic

Treated with antibiotics (e.g. examples are ciprofloxacin, ofloxacin and levofloxacin)

#### Herbal treatment

- *Alchornea cordifolia* (leaves), *Euphorbia hirta* (leaves), *Bridelia ferruginea* (leaves), *Combretum smeathannii* (leaves)

## **6. Prevention and control**

- Basic preventive measures: use of condoms helps prevent transmission of gonorrhoea during vaginal or anal sex.
- Screening measures: a regular screening helps to prevent the spread of infection to new partners. In the case of a positive result, it is important to notify any person with whom you have had sex and could have been exposed.

## **7. References**

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## N° 14: HAEMORRHOIDS

### 1. Description

Haemorrhoids also known as piles are dilated veins that form in the walls of the anus and sometimes around the rectum. They are usually caused by untreated constipation but occasionally associated with chronic diarrhoea. Although haemorrhoids occur in everyone, they become large and cause problems in only 4% of the general population including both men and women. Their prevalence peaks between 45 and 65 years of age.

There are two main types of haemorrhoids:

- Internal haemorrhoid-the haemorrhoid originates at the top (rectal side) of the anal canal
- External haemorrhoid- the haemorrhoid originates at the lower end of the anal canal near the anus

### 2. Causes

There are several theories about the cause of haemorrhoids. The main physiological causes are: prolonged sitting on the toilet, constipation, pregnancy and age. Other common causes include: prolapsed haemorrhoids, tumours in the pelvis and colorectal tumours. Rare causes include anal fissure, skin abrasions from scratching, diverticular disease (excessive bleeding), proctitis: inflammatory, infectious or iatrogenic (NSAID suppositories, external radiotherapy) and squamous cell carcinoma of the anus

### 3. Signs and symptoms

Symptoms start with bleeding after defecation. Untreated haemorrhoids can worsen, and protrude from the anus. The signs and symptoms are:

- **Internal haemorrhoids**-are usually painful and somewhat inconspicuous; sometimes associated with bleeding and anal itching; often the first and second stage (stage 1 and 2) of hemorrhoids.
- **External haemorrhoids**: at more advanced stages (stages 3 and 4), haemorrhoids protrude from the anus and become visible; more pronounced pain, especially during defecation.

External haemorrhoids cause a few of the symptoms that are typical of internal haemorrhoids, perhaps, because they are low in the anal canal and have little effect on the function of the anus. External haemorrhoids rarely cause serious complications, however, blood can clot inside them (thrombosis) causing a painful anal lump that often requires medical attention. The thrombosed haemorrhoid may heal with scarring and leave a tag of skin protruding from the anus, which can make anal cleaning difficult or irritate the anus.

### 4. Investigations

- Rectal examination with a gloved finger may uncover an internal hemorrhoid high in the anal canal-helpful in excluding rare cancers that begin in the anal canal and adjacent rectum
- Anoscope (a three-inch long, tapering, metal or clear plastic hollow tube approximately one inch in diameter at its viewing end)
- Flexible sigmoidoscopy or colonoscopy-helps to exclude important causes of bleeding other than haemorrhoids

### 5. Treatment

Treatment involves changing the diet to prevent constipation and avoid further irritation, the use of topical medication, and sometimes surgery. Products used for the treatment of hemorrhoids are available as ointments, creams, gels, suppositories, foams, and pads.

**The main forms of treatment are:**

- a) Local anesthetics- e.g. benzocaine; benzyl alcohol, dibucaine; lidocaine, etc
- b) Vasoconstrictors-ephedrine sulfate; epinephrine; phenylephrine

- c) Protectants-e.g. aluminum hydroxide gel, cocoa butter; glycerin; kaolin; lanolin; mineral oil (Balneol); white petrolatum; starch; zinc oxide or calamine (which contains zinc oxide) in concentrations of up to 25%; cod liver oil or shark liver oil
- d) Astringents-e.g. calamine, zinc oxide; witch hazel
- e) Antiseptics: e.g. boric acid; hydrastis; phenol; benzalkonium chloride; benzethonium chloride
- f) Keratolytics: e.g. aluminum chlorhydroxy allantoinate; resorcinol
- g) Analgesics: e.g. menthol; camphor; juniper tar

### Herbal treatment

- Venotonics: witch hazel, usually taking in the form of tablets, ointments, suppositories
- Chamomile added to a sitz bath or wipe
- Chestnut, usually taking the form of a capsule
- *Picralima nitida* (seed), *Garcinia kola* (seed), *Aloe vera* (leaves), *Eugenia aromaticum* (flower bud)
- *Picralima nitida* (seed), *Cassia podocarpa* (eaves), *Eugenia aromaticum* (flower bud), *Xylopi aethiopica* (fruit)
- *Nauclea latifolia* (root), *Khaya senegalensis* (bark), *Xylopi aethiopica* (fruit), *Zingiber officinale* (rhizome)
- Exercise
- Psychotherapy
- Dietary advice
- Sitting in a sitz bath with a solution of witch hazel ointment

### 6. Prevention and control

- Increase intake of dietary fibre-found in numerous foodstuffs including fresh and dried fruits, vegetables, grains, and cereals; supplemental fiber (psyllium, methylcellulose, or calcium polycarbophil) also may be used to increase the intake of fiber
- Take stool softeners and increase drinking of liquids
- Eat breakfast in the morning
- Regular exercises– twenty minutes of walking per day at a good pace can stimulate intestinal transit.  
Avoid sitting for long hours; if not possible, get up for 1 or 2 minutes.
- Empty bowels regularly-do not delay the time to defecate if the need arises
- At the time of defecation, avoid forcing with bated breath
- Do not sit on the toilet seat for longer than necessary

### 7. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## N° 15: HEPATITIS

### 1. Description

Hepatitis is an inflammation of the liver, most commonly caused by a viral infection (hepatitis A, B, C ...), but sometimes by alcohol, or by a drug or a chemical. There are several hepatitis viruses; they have been named types A, B, C, D, E, F (not confirmed), and G. The most common hepatitis viruses are types A, B, and C.

**Hepatitis A** (acute viral hepatitis): This is the least serious of the hepatitis viruses. Hepatitis A is transmitted through the ingestion of food or water contaminated by human waste containing hepatitis A (the faecal-oral mode of transmission). It is typically spread among household members and close contact through the passage of oral secretions (intimate kissing) or stool (poor hand washing).

**Hepatitis B** ("serum hepatitis"): Hepatitis B is transmitted by sexual intercourse and the transfer of blood through shared needles in drug abusers, accidental needle sticks with needles contaminated with infected blood, blood transfusions, haemodialysis, and by infected mothers to their newborns. Hepatitis B also can be spread by tattooing, body piercing, and sharing razors and toothbrushes. About 6-10% of patients develop chronic HBV infection, which may last for about six months and often years to decades. Patients with chronic hepatitis B infection also are at risk of developing cirrhosis, liver failure and liver.

**Hepatitis C** ("non-A, non-B hepatitis"): it is the most insidious form of viral hepatitis. Up to 80% of infections with hepatitis C become chronic. The virus is most often transmitted by direct contact with infected human blood, through shared needles among drug abusers, blood transfusion, haemodialysis, and needle sticks. Approximately 90% of transfusion-associated hepatitis is caused by hepatitis C. Transmission of the virus by sexual contact has been reported, but is considered rare. Patients with chronic hepatitis C infection are at risk for developing cirrhosis, liver failure, and liver cancer.

**Hepatitis types D, E, F (not confirmed yet), and G**-the most important of these at present is the hepatitis D virus (HDV), also known as the delta virus or agent. HDV requires concomitant infection with hepatitis B to survive, because it needs a protein that the hepatitis B virus makes to enable it to infect liver cells. Hepatitis D is spread by shared needles among drug abusers, contaminated blood, and by sexual contact, essentially the same ways as for hepatitis B. Patients with chronic hepatitis due to hepatitis B and hepatitis D viruses develop cirrhosis (severe liver scarring) rapidly. Moreover, the combination of delta and B virus infection is very difficult to treat.

**Autoimmune hepatitis:** this is a chronic inflammatory disease of the liver characterized by the presence of autoantibodies.

The most common risk factors of viral hepatitis are health care professionals, people with multiple sexual partners, intravenous drug users, and hemophiliacs. Viral hepatitis is generally thought to be as much as ten times more common among lower socioeconomic and poorly educated individuals and about one third of all cases of hepatitis come from an unknown or unidentifiable source.

The period of time between exposure to hepatitis and the onset of the illness is called the incubation period. This period varies depending on the specific hepatitis virus. For example, Hepatitis A has an incubation period of about 15-45 days; hepatitis B from 45-160 days, and hepatitis C from 2 weeks to 6 months.

### 2. Signs and symptoms

In many cases, patients infected with hepatitis A, B, and C have few or no symptoms. For those who do develop symptoms, the most common are flu-like symptoms including loss of appetite, nausea, vomiting, fever, weakness, tiredness and abdominal discomfort (especially right side)aching in the abdomen. Less common symptoms include dark urine (the color of tea), light-colored stools, fever and jaundice (yellow skin and cornea).

Rarely, individuals with acute hepatitis A and hepatitis B infections develop severe inflammation, and the liver fails (acute fulminant hepatitis). These patients show the typical

symptoms of acute hepatitis and the additional problems of confusion or coma (due to the liver's failure to detoxify chemicals) and bruising or bleeding (due to a lack of blood clotting factors). The condition is life-threatening and up to 80% of people who develop it can die within days to weeks.

### 3. Investigations

Testing for hepatitis A, B or C is recommended for people at high risk, in particular: people with HIV, pregnant women and people with pre-existing liver disease. There are three types of blood tests for evaluating patients with hepatitis: liver enzymes, antibodies to the hepatitis viruses, and viral proteins or genetic material (viral DNA or RNA). Ultrasound testing can be used to exclude the possibility of gallstones or cancer.

### 4. Treatment

Treatment of acute viral hepatitis involves relieving symptoms and maintaining adequate intake of fluids. Treatment of chronic viral hepatitis involves medications to eradicate the virus and taking measures to prevent further liver damage.

#### Herbal treatment:

- *Cochlospermum tinctorium* (rhizome), *Entada africana* (roots), *Combretum micranthum* (leaves), *Phyllanthus amarus* (leaves)
- *Cochlospermum tinctorium* (rhizome), *Tinospora bakis* (rhizome)
- *Phyllanthus amarus* (aerial parts), *Chrysantellum americanum*, *Combretum micranthum* (leaves), *Cochlospermum tinctorum* (rhizome), *Entada africana* (roots)
- Others are liquorice, schisandra, milk thistle
- Dietary and lifestyle advice to relieve discomfort and promote healing:
  - a. stop drinking
  - b. have adequate rest
  - c. stop smoking
  - d. avoid large meals
  - e. seek support
  - f. avoid exposure to toxic chemicals, etc.

### 6. Prevention and control

#### Hepatitis A and B

- Never eat mussels or shells found on the sea without cooking for less than 6 minutes.
- When traveling to areas where hepatitis A is common, be vaccinated one month before departure
- Always use condoms during sexual intercourse
- Wash hands routinely after defaecating, before handling food and before eating
- Ensure that equipments/tools for tattoos or body piercing are sterilized or disposable
- Wear gloves before touching a person's blood (infected or not)
- Avoid sharing a razor or toothbrush with another person
- Never share needles or syringes to inject drugs
- Vaccination is highly recommended

#### Toxic hepatitis

- Follow the dosage on the package of drugs (including those OTC) and natural health products.
- Pay attention to possible interactions between drugs and alcohol
- Store medicines in a safe place away from children
- Adopt adequate safety measures in the workplace
- Take only herbal medicines that are safe and of good quality

### 7. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## N° 16: BENIGN PROSTATIC HYPERPLASIA

### 1. Description

Benign prostatic hyperplasia (BPH) is nonmalignant (noncancerous) enlargement of the prostate gland. Almost all men suffer from BPH one time or another. It generally begins in men from the age of 30, evolves slowly, and most commonly only causes symptoms after 50. BPH occurs in more than 50% of men aged 60 and 90% of those over 80 years. The cause of BPH is unknown, although it has been speculated that it may be due to reduced testosterone levels, which occurs naturally with age.

### 2. Signs and symptoms

Growth in size of the prostate gland in BPH may compress the urethra and thus impede the flow of urine from the bladder through the urethra to the outside. Common symptoms include:

- Compelling urge to urinate
- Urinary retention leading to the need to urinate frequently during the day and night
- Slow flow of urine
- Urgency and difficulty starting the urinary stream
- Painful urination
- Intermittent flow
- Sensation of not emptying your bladder completely

Signs of complications observed are:

- Lack of sleep
- Urinary tract infections
- Kidney stones
- Distension of the bladder wall
- Complete blockage of the urethra leading to kidney damage

### 3. Investigations

- Rectal examination of the urethra, prostate, and bladder
- Urine culture
- Assessment of renal function
- Abdominal x-ray
- Renal ultrasonography
- Watching act of urination and measuring the flow rate

### 4. Treatment

Medical treatment of BPH is usually reserved for men who have significant symptoms. The available drugs include alpha blockers to relax the smooth muscles of the prostate, and the bladder neck, which helps to relieve urinary obstruction. Surgery or office procedures may also be used to treat BPH, most commonly in men who have not responded satisfactorily to medication or those who have more severe problems, such as a complete inability to urinate. Other treatment methods include transurethral resection of the prostate, laser procedures and microwave therapy

#### Herbal treatment

- *Alchornea cordifolia* (leaves), *Flugea virosa* (leaves), *Euphorbia hirta* (aerial part) or;
- *Tetrapleura tetraptera* (fruit), *Flugea virosa* (leaves), *Euphorbia hirta* (aerial parts)
- *Sabal serrulata* *Serenoa repens*
- Stinging nettle: *Urtica dioica*
- African plum: *Prunus africanus* = *Pygeum africanum*
- Squash or Pumpkin, *Cucurbita pepo*
- Pollen of certain grasses.
- Empty bladder as much as possible at each urination
- Reduce alcohol and coffee
- Regular urination, e.g. every 4 hours
- Intake of dietary supplements containing zinc
- Stay physically active: physical activity diminishes retention of urine in the bladder

- Psychotherapy
- Avoid stress

## **5. Prevention and control**

The best protection against prostate problems is to have regular medical checkups that include a careful prostate examination. Regular checkups are important even for men who have had surgery for BPH.

## **6. References**

[http://www.passeportsante.net/fr/Maux/Problemes/Fiche.aspx?doc=hypertrophie\\_benigne\\_prostate\\_pm](http://www.passeportsante.net/fr/Maux/Problemes/Fiche.aspx?doc=hypertrophie_benigne_prostate_pm)

Health Encyclopedia - Diseases and Conditions.

<http://www.healthscout.com/nav/ency/1/main.html>

## N° 17: URINARY TRACT INFECTIONS

### 1. Description

A urinary tract infection is an infection that may affect one or more parts of the urinary system: kidneys, ureters, bladder and urethra. The majority are caused by *E. coli* bacteria, but many other bacteria, fungi, and parasites may also cause UTIs. The type of UTI depends on the affected part of the urinary system:

- Cystitis is an infection of the bladder and urethra. It is very common among women.
- Urethritis only affects the urethra. It is a sexually transmitted infection (STI) common in men.
- Pyelonephritis means inflammation of the kidney and is a serious condition.

### 2. Causes

Urinary tract infections are usually caused by the abnormal proliferation of bacteria. Factors that increase the risk are:

#### In women

- Poor hygiene of the genital area
- Frequent and intense sexual intercourse after a period of abstinence
- Pregnancy
- Contraceptives-diaphragm or spermicide

#### In men

- Benign prostatic Hyperplasia or prostatitis
- Anal sex without a condom

#### Generally

- Malformation of the urinary tract
- Kidney Stones
- Urinary catheter

In a pregnant woman, UTIs can cause:

- Threatened abortion
- Premature birth

In men, repeated UTIs can cause:

- Male infertility
- Prostatitis
- Pyelonephritis

In severe cases, urinary tract infection may progress to renal failure

### 3. Signs and symptoms

Common urinary tract infection (UTI) symptoms in women include:

- Urge to urinate frequently, often in small amounts
- Burning with urination
- Cloudy urine
- Strong unpleasant smell of urine
- Dark or bloody urine
- Pelvic pain
- Flank or back pain (kidney infection)
- Fever, chills (usually with kidney infection)
- Other possible symptoms include bloating, vaginal discharge

Common urinary tract infection (UTI) symptoms in men include:

- Urge to urinate frequently, often in small amounts
- Burning with urination
- Cloudy urine
- Strong unpleasant smell of urine
- Dark or bloody urine

- Rectal pain (kidney infection)
- Flank or back pain (kidney infection)
- Other symptoms may include penile, testicular and abdominal pain, and penile discharge

Common urinary tract infection (UTI) symptoms in children include:

- Urge to urinate frequently, often in small amounts
- Burning with urination
- Cloudy urine
- Strong unpleasant smell of urine (not as reliable in children)
- Dark or bloody urine
- Abdominal pain
- Fever
- Vomiting
- Other symptoms (especially in newborns and infants) may include hypothermia, diarrhea, jaundice, poor feeding and in some children, bedwetting

There can be many complications of urinary tract infections, including dehydration, sepsis, kidney failure, and death. If treated early and adequately, the prognosis is good for most patients with a UTI.

#### 4. Investigations

- Urinalysis
- Other tests may include blood cultures, a complete blood count, intravenous pyelogram, a CT scan, or other specialized tests.

**In general, UTIs are diagnosed usually by isolating and identifying the urinary pathogen from the patient.**

#### 5. Treatment

Although there is no vaccine available for UTIs, there are many ways a person may reduce the chance of getting a UTI.

- UTIs are treated with antibiotics
- Over-the-counter (OTC) medicines offer relief from the pain and discomfort of UTIs but they don't cure UTIs

#### Herbal treatment

- There are home remedies for UTI, but most may, at best, help reduce the risk or discomfort of UTIs. Common herbs used include echinacea, nettle, horsetail, horseradish, bearberry (*Uva ursi*), golden rod.
- Others are *Ageratum conyzoides* (leaves), *Zanthoxylum xanthoxyloides* (bark) and *Cassia alata*
- Dietary advice
- Intake of cranberry juice for people prone to recurrences
- Physical exercise
- Psychotherapy

#### 6. Prevention and control

Increase fluid intake: 6 to 8 glasses of water or various beverages (juice, broth, tea, etc..) per day can increase urinary flow and prevent bacteria from forming in the bladder.

#### Women:

- Wash the vulva and around the anus daily
- Avoid genital deodorant and douching
- Urinate shortly after sex
- After urination or a bowel movement, wipe from front to back to avoid contaminating the urethra with bacteria from faeces

**Men:**

- Use condoms with a new partner or in the case of anal sex
- Must treat enlarged prostate, if applicable
- Temporarily avoid coffee, alcohol, soft drinks containing caffeine, orange juice or grapefruit and spicy foods. These foods irritate the bladder and make you want to urinate more frequently.

**7. References**

Health Encyclopedia - Diseases and Conditions.

<http://www.healthscout.com/nav/ency/1/main.html>

## **N° 18: SEXUALLY-TRANSMITTED INFECTIONS**

### **1. Description**

Sexually-transmitted Infections (STI) are diseases transmitted by sexual contact including sexual intercourse (vaginal and anal) and also kissing, oral-genital contact, and the use of sexual "toys," such as vibrators. Examples of some of the sexually transmitted infections (STIs) are HIV/AIDS, chlamydia, chancroid, trichomoniasis, genital herpes, genital warts, gonorrhoea, hepatitis B, and syphilis.

### **2. Causes**

The main causes are bacteria, viruses, parasites or fungi. Currently, the most common Sexually transmitted infections are:

- Chlamydia;
- Warts (HPV infection);
- Genital herpes;
- Hepatitis B;
- HIV / AIDS

### **3. Signs and symptoms**

The signs and symptoms vary because they are symptomatic of the underlying disease. Sexually transmitted infections can have an impact on fertility and the foetus.

### **4. Investigations**

- General examination for neurological or cardiovascular evidence of advanced syphilis, lymphadenopathy, Kaposi's sarcoma and opportunistic infection in patients suspected of AIDS
- Gram-stain for leucocytes and organisms should be made and wet preparation should be examined for *Trichomonas vaginalis*
- Immunofluorescent technique
- Microbiological culture
- Protoscopy

### **5. Treatment**

Many STIs are treatable, but effective cures are lacking for others, such as HIV, HPV, and hepatitis B and hepatitis C. Even gonorrhea, once easily treated, has become resistant to many of the older traditional antibiotics. Many STDs can be present in, and spread by, people who do not have any symptoms of the condition and have not yet been diagnosed with an STD. Therefore, public awareness and education about these infections and the methods of preventing them is important.

#### **Herbal treatment**

- *Parkia biglobosa* (stem bark), *Zanthoxylum xanthoxyloides* (stem bark), *Spathodea campanulata* (stem bark)
- Drink cranberry juice
- Physical exercises
- Psychotherapy

### **6. Prevention and control**

- The most effective way to prevent the spread of STDs is abstinence. Alternatively, the diligent use of latex barriers, such as condoms, during vaginal or anal intercourse and oral-genital contact helps decrease the spread of many of these infections.
- Health education
- Avoidance of sexual contact with individuals known to have STD or in high risk groups

### **7. References**

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## **N° 19: MALE INFERTILITY-OLIGOSPERMIA**

### **1. Description**

Oligospermia or oligozoospermia refers to abnormally low sperm count (less than 20 million spermatozoa per millilitre of ejaculate) and is a common finding in male infertility. We talk about Cryptozoospermia (or extreme oligozoospermia) in the case of sperm showing the presence of less than one million sperm per ml of semen. It differs from azoospermia, which is the complete absence of sperm in the ejaculate and asthenospermia, which is the absence of sperm motility.

### **2. Causes**

Causes of oligospermia include:

- Obstruction of the normal flow of sperm due to such conditions as testicular trauma and vasectomy
- Scarring due to surgery on the male reproductive system or from infection and sexually transmitted diseases.
- Decrease in sperm production due to such conditions as varicoceles, hormonal disorders, diseases of the testicles, and obesity
- Sexually transmitted disease, such as chlamydia, and gonorrhea
- Other causes include stress, smoking, drug or alcohol use, some medications, exposure to some toxins, malnutrition, and being underweight. Some
- Hormone deficiency (congenital or induced by an external cause)  
Abnormally located testis (undescended, cryptorchidism) or exposure to high temperatures
- Drug inhibition of spermatogenesis (eg high doses of spironolactone or ketoconazole) and/or the effects of chemotherapy and/or radiotherapy, especially if it is testicular cancer
- Autoimmune disorders

### **3. Signs and symptoms**

The main symptoms and complications of oligospermia are sub-fertility or infertility. There are also a variety of symptoms of underlying causes of oligospermia, such as sexually transmitted diseases and hormonal disorders.

### **4. Investigations**

- Making a diagnosis of oligospermia includes:
- Taking a medical and sexual history and completing a general physical examination as well as an exam of the penis and testicles
- Diagnostic testing includes performing a semen analysis, lab tests, testicular biopsy
- Other tests may be done to rule-out other potential causes of oligospermia, such as a hormonal disorder

### **5. Treatment**

Treatment varies depending on the type and severity of oligospermia, the individual case, and the presence of complications.

- The first step in the treatment of oligospermia is prevention, which includes preventing sexually transmitted diseases by abstaining from sexual activity or having sex only within a mutually monogamous relationship in which neither partner is infected with oligospermia
- Latex condoms also provide some protection from some sexually transmitted diseases when used properly
- Oligospermia caused by chlamydia or gonorrhea can be treated with oral antibiotic medication Surgery may be needed if the cause is a varicocele or if scarring is causing a blockage of the flow of sperm.
- Vitamin E, vitamin C, antioxidants supplementation may be helpful

### **Herbal treatment**

- *Harungana madagascariensis* (leaves), *Bridelia ferruginea* (leaves) and *Euphorbia hirta* (leaves)
- Dietary advice
- Exercise
- Psychotherapy

### **6. Complications**

- Severe oligospermia
- Male infertility

### **7. Prevention and control**

- Improving the diet
- Losing or gaining weight as needed
- Avoiding smoking
- Reducing alcohol intake
- Avoiding hot tubs, tight underwear, and other factors that may create excessive heat around the testicles and reduce sperm count
- Proper treatment of STIs

### **8. Références**

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## **N° 20: OTITIS MEDIA**

### **1. Description**

Otitis media is an infection or inflammation of the middle ear. "Otitis" means inflammation of the ear, and "media" means middle. The inflammation often begins with infections that cause sore throats, colds or other respiratory problems, and spreads to the middle ear. Infections can be caused by viruses or bacteria, and can be acute or chronic.

- Acute otitis media: usually of rapid onset and short duration. It is typically associated with fluid accumulation in the middle ear together with signs or symptoms of ear infection; a bulging eardrum usually accompanied by pain, or a perforated eardrum, often with drainage of purulent material (pus, also termed suppurative otitis media). Fever can be present.
- Chronic otitis media: is a persistent inflammation of the middle ear, typically for a minimum of a month. Following an acute infection, fluid may remain behind the eardrum for up to three months before resolving. Chronic otitis media may develop after a prolonged period of time with fluid or negative pressure behind the eardrum. It can cause ongoing damage to the middle ear and eardrum, and there may be continuing drainage through a hole in the eardrum. Chronic otitis media often starts painlessly without fever and sometimes a subtle loss of hearing can result

### **2. Causes**

- Risk factors are many in children, which is not the case in adults. Factors that increase the risk in children are:
- Attending a daycare or nursery
- Exposure to tobacco smoke or high levels of pollution
- Bottle feeding rather than breastfeeding
- The frequent use of dummies
- Malfunction of the Eustachian tube that drains liquids poorly

### **3. Signs and symptoms**

In children and infants

- Fever
- Signs of upper respiratory infection such as a runny or stuffy nose, or a cough
- Pain in one or both ears, leading the child to touch the ear frequently
- Tears, irritability, difficulty falling asleep
- Lack of appetite
- Liquid flowing in one ear
- Loss of hearing (the child does not respond to soft sounds)
- In some children, otitis is manifested by digestive disorders (diarrhea, vomiting)
- Severe ear infections may cause the eardrum to rupture ; the pus then drains from the middle ear into the ear canal

Complications of otitis media include:

- Perforation of the eardrum with risk of deafness
- Risk of sinusitis and meningitis

#### **Adults**

- Throbbing (punctuated by heartbeats) in the ear, which may radiate into the head
- Sensation of plugged ear causing hearing loss
- General malaise (lack of energy, irritability, difficulty sleeping, etc.); sometimes accompanied by a high fever
- Tinnitus
- Sometimes a yellowish secretions flow through the ear canal (which indicates that the eardrum is perforated)
- Dizziness, loss of balance, dizziness
- Cold, which often precedes otitis media

#### **4. Investigations**

Three criteria are needed to diagnose acute otitis media; acute onset, middle ear effusion, and middle ear inflammation. Recurrent acute otitis media is defined as three acute otitis media episodes in 6 months, or 4 acute otitis media episodes in a year. There is no definitive lab test for acute otitis media. Identification of the three criteria is dependent on clinical observation and use of pneumatic otoscopy.

#### **5. Treatment**

- Use of antibiotics (e.g. amoxicillin)
- Both oral and topical analgesics are effective in controlling the pain associated with ear infections

#### **Herbal treatment**

*Blighia sapida* (leaves), *Aloe vera* (gel) and *Ocimum basilicum* (leaves)

#### **6. Prevention and control**

There are several ways to prevent ear infections.

- Drink a lot (water, broth) to help relieve pain
- Sit, especially when fever is present
- Apply a little heat on the ear can reduce pain. Use a hot water bottle, a towel warmed (but dry) or a heating pad (low intensity)
- Avoid airplanes, scuba diving and swimming head under water
- Avoid wetting the ear if the eardrum is perforated
- Wear earplugs during swimming and always dry the ears
- Exercises to equalize pressure in the ear
- Swallowing often simulate a yawn, chew gum
- Avoid giving babies a feeding bottle when lying down
- Avoid exposure to cigarette smoke

#### **7. References**

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## N° 21: ALLERGIC RHINITIS

### 1. Description

Rhinitis means "irritation of the nose" and is derived from the word rhino, meaning nose. Allergic rhinitis which occurs during a specific season is called "seasonal allergic rhinitis" (hay fever) when caused by pollen (trees, grass, ragweed, etc.). When it occurs throughout the year, it is called "perennial allergic rhinitis." Rhinosinusitis is the medical term that refers to inflammation of the nasal lining as well as the tissue lining of the sinuses. This term is sometime used because the two conditions frequently occur together. Allergic rhinitis can lead to other diseases such as sinusitis and asthma.

### 2. Causes

The major risk factors of allergic rhinitis are:

- Hereditary: when both parents have an allergy (no matter which), the risk for the child to suffer from allergic rhinitis is even higher
- Repeated exposure to airborne allergens (eg, pollen)
- Exposure to cigarette smoke, especially during the first year of life, and other substances such as fireplace smoke and air pollutants

### 3. Signs and symptoms

Symptoms of allergic rhinitis, or hay fever, frequently include:

- Nasal congestion
- Clear runny nose
- Sneezing
- Eye itching, redness, and excess tears in the eyes
- Nose itching
- Postnasal dripping of clear mucus frequently causes a cough
- Loss of the sense of smell and taste
- Nose bleeding
- Tension in the sinus area  
Sore throat, cough

The eye symptoms are referred to as "allergic conjunctivitis" (inflammation of the whites of the eyes). These allergic symptoms often interfere with one's quality of life and overall health.

### 4. Investigations

- Identify the offending substances (allergens)-e.g. cats, grass
- Skin testing is often needed to identify exactly the specific substance causing the allergy
- Blood tests

### 5. Treatment

- Many patients respond to antihistamine medications
- Decongestants
- Nasal sprays
- Allergy desensitization or immunotherapy
- Herbal medicine- e.g. Butterbur
- Homeopathy

#### Herbal treatment

- *Desmodium adscendens* (leaves), *Euphorbia hirta* (leaves), *Zingiber officinale* (rhizome) and *Allium sativum* (bulb)
- To unblock the nose of a baby or a young child, remove some of the mucus using a nasal bulb. Then place a drop of warm saline solution in each nostril so that the drop sinks to the bottom of the nose. Straighten the child as soon as the drop has penetrated into the nose.
- Exercise
- Psychotherapy

## **6. Prevention and control**

- Treating the symptoms of allergic rhinitis as they arise helps to prevent complications such as otitis media, asthma and chronic sinusitis.
- Avoid smoking and second-hand smoke.
- Reduce exposure to allergens (pollen, mold, dust mites, etc.)

## **7. References**

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## N° 22: SINUSITIS

### 1. Description

Sinusitis refers to inflammation of the air cavities within the passages of the nose. The sinuses are bony cavities (in four pairs) located in the facial bones. This inflammation of the sinus mucosa, also known as rhinosinusitis is usually caused by a bacterial or viral infection (usually cold). Sinusitis can also be caused allergies and chemical or particulate irritation of the sinuses. The five most common bacteria causing sinus infections are *Streptococcus pneumoniae*, *Haemophilus influenzae*, *Moraxella catarrhalis*, *Staphylococcus aureus*, and *Streptococcus pyogenes*.

Sinusitis can be of two types:

- Acute: caused in most cases by a viral infection type cold
- Chronic: it is the result of inadequately treated infectious episodes

Complications of a sinus infection that may develop are meningitis, brain abscess, osteomyelitis, and orbital cellulitis.

### 2. Causes

Sinus infections are caused by infections from a pathogenic microorganism (virus, bacterium, or fungus), which grows within a sinus and causes intermittent blockage of the sinus ostium. Bacterial infection of the sinuses is suspected when facial pain, pus-like nasal discharge, and symptoms that persists for longer than a week and are not responding to over-the-counter nasal medications.

### 3. Signs and symptoms

The main symptoms are sinus headache, facial tenderness (above the eyebrows, nose, cheeks, around and behind the eyes), pressure or pain in the sinuses or on one side of the face, fever, cloudy discolored drainage, and feeling of nasal stuffiness, sore throat, and cough.

Factors that increase the risk are:

Cold or other respiratory infection

- Humid or polluted environment
- Smoking or exposure to smoke
- Asthma or respiratory allergies

In rare cases, serious complications can occur. These include:

- Eye disease (especially ethmoiditis)
- Brain disorders (frontal and sphenoid sinusitis)
  - a. Meningitis
  - b. brain abscess
  - c. cavernous sinus thrombophlebitis
  - d. osteomyelitis (mainly in children)

### 4. Investigations

Sinus infection is most often diagnosed based on a history and examination. Because plain X-ray studies of the sinuses may be misleading and procedures such as CT and MRI scans, are so expensive and not readily available, most cases of sinus infection are initially diagnosed and treated based on clinical findings on examination. These physical findings may include:

- redness and swelling of the nasal passages,
- purulent (pus like) drainage from the nasal passages (the symptom most likely to clinically diagnose a sinus infection),
- tenderness to percussion (tapping) over the cheeks or forehead region of the sinuses, and swelling about the eyes and cheeks

Occasionally, nasal secretions are examined for secreted cells that may help differentiate between infectious and allergic sinusitis.

## 5. Treatment

- Bacterial sinusitis is usually treated with antibiotic therapy
- For sinusitis caused by virus infection, no antibiotic treatment is required. Frequently recommended treatments include pain and fever medications (such as acetaminophen), decongestants and mucolytics

### Herbal treatment

- Home remedies for sinus infections include, decongestants, and mucolytics. Nasal irrigation can be accomplished with a Neti-pot or rinse kit (nasal bidet).
- Steam inhalation with or without essential oils (peppermint, eucalyptus)
- Inhalation of salt water (saline or home preparation available in pharmacies)
- Drinking plenty of fluids (8 to 10 glasses of water or other liquids per day) to avoid dehydration and evacuate secretions more easily
- *Ocimum gratissimum*, *Heliotropium indicum*, *Cymbopogon citratus* and *Allium sativum*
- Others are Gentian, primrose, common sorrel, lemongrass and elderberry, Cape Geranium, Andrographis, Eucalyptus, Peppermint

## 6. Prevention and control

Preventive measures include:

- Avoid colds and allergies  
Avoid smoking or exposure to second hand smoke
- Encourage the removal of nasal secretions by:
  - Wiping nose, drinking plenty of water, using a humidifier to liquefy secretions
  - Nasal irrigation with salt water
- Increase water consumption to lighten and evacuate secretions more easily
- Avoid exposure to temperature changes, a cold and dry air.
- Avoid bending head down, as this can increase the pain
- Avoid swimming underwater, or flying during the acute phase
- Avoid aircraft or any other activity involving changes in pressure (diving, mountaineering, ...)

## 7. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## **N° 23: BREAST CANCER**

### **1. Description**

Breast Cancer is the commonest cancer affecting women. Early detection of this cancer is possible through monthly breast self examination, which is especially recommended for women of child-bearing age, and periodic screening through clinical breast examination (3 yearly for women below 40 years and yearly for women above 40years) as well as mammography every 2years for women 40 years and above. Various modalities are available for the treatment of breast cancer which depends on the biological characteristics of the tumour, stage of disease and other patient factors.

### **2. Causes**

- Unknown
- Associated risk factors
- Female sex
- Family history of breast cancer
- Previous personal history
- Oestrogen therapy

### **3. Signs and symptoms**

- Lump in the breast
- Other changes in breast: change in size and/or shape
- Skin changes in breast:
  - Peau d'orange
  - Skin nodules
  - Ulceration
- Changes in the nipple and areola:
  - Nipple discharge
  - Nipple retraction
  - Eczema/ulceration of nipple or areola
  - Swelling in axilla
  - Swelling of upper limb
- Metastatic disease:
  - Bone pain
  - Pathological fractures
  - Back pain
  - Paraplegia
  - Breathlessness from pleural effusion and lung metastasis
  - Brain metastasis (Headache, vomiting altered consciousness, localizing signs)
- Breast lump:
  - Hard
  - Edges may be indefinite
  - Surface may be rough
  - May be tethered to skin or attached to skin and underlying tissues
- Skin:
  - Peau d' orange , tethering, nodules or ulceration
  - Nipple retraction
  - Bloody nipple discharge
  - Palpable axillary nodes
  - Look for evidence of metastatic disease

### **4. Investigations**

- Mammography
- Ultrasonography of the breast
- Biosy and fine Needle Aspiration for cytology and histology

## 5. Treatment

The goals of treatment are:

- To achieve a cure
- To prevent local and distant metastasis
- To relieve pain in incurable cases
- To prolong survival in metastatic disease

### 5.1. Orthodox treatment

Treatment plans for breast cancer are developed based on a several factors: the type and stage of the cancer, the sensitivity of the cancer to certain hormones, and the medical history of the patient.

- Primary treatment: surgery, either a lumpectomy or mastectomy.
- Adjuvant Therapy Treatment:
  - a. Biological or targeted therapy
  - b. Chemotherapy
  - c. Hormone therapy
  - d. Radiation, a local adjuvant therapy

### 5.2. Herbal treatment

- *Vernonia amygdalina* (leaves), *Emilia sonchifolia* (leaves), *Citrus aurantifolia* (leaves), *Momordica charantia* (leaves) and *Allium sativum* (bulb)
- Stress management and relaxation techniques, including meditation and visualization, can also assist in overcoming the fatigue associated with breast cancer

## 6. Prevention and control

- No single key to preventing breast cancer
- For the 90% of breast cancer patients who are not genetically predisposed to the disease, some potential causes have been suggested:
  - a. Healthy Living
  - b. Preventative Medication (e.g. tamoxifen)
  - c. Preventative surgery (women who have a BRCA1 or BRCA2 gene mutation may want to consider a preventative mastectomy)
  - d. Pre-emptive Screening

However, a preventative strategy is difficult to create with any degree of accuracy.

## 7. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## **N° 24: PROSTATE CANCER**

### **1. Description**

Prostate cancer is a form of cancer that develops in the prostate, a gland in the male reproductive system. Most prostate cancers are slow growing, although some may be aggressive. Ninety-five per cent of these tumours are adenocarcinomas. The majority of men affected are aged between 65 and 85 years. The incidence increases with age. It is recommended that every male of 40 years and above, should have annual screening by Prostate Specific Antigen (PSA) tests and Digital Rectal Examination (DRE) since early detection is associated with better prognosis. It is worth noting that not every prostate on DRE is malignant. Likewise a normal-feeling prostate does not exclude a malignancy. A prostatic biopsy is therefore necessary to establish a diagnosis.

### **2. Causes**

- Ageing
- Functional testes
- Family history
- Race (more common in blacks)
- High dietary fat intake

### **3. Symptoms**

- Lower Urinary Tract Symptoms(LUTS)
- Retention of urine
- Haematuria
- General debility anorexia, weight loss, listlessness
- Bone pain (commonly in the waist or limbs)
- Paralysis in the lower limbs or inability to walk

### **4. Signs**

On DRE clinical signs include:

- Hard prostate gland with an irregular surface and edges
- Obliterated median sulcus
- Adherent rectal mucosa
- Advanced or metastatic disease:
- Anaemia
- Uraemia
- Wasting
- Bone tenderness
- Paraplegia
- Pathological fracture

### **5. Investigations**

- FBC
- Blood urea, electrolytes and creatinine
- Prostate specific antigen (PSA)
- Liver functions tests
- Abdominal and pelvic ultrasound
- Transrectal ultrasound (TRUS) of the prostate, if available
- Transrectal needle biopsy of the prostate
- TRUS – guided or finger-guided

### **6. Treatment**

Treatment objectives are:

- To relieve symptoms
- To control complications
- To achieve cure for early disease
- To prevent local progression and metastases

## Orthodox

The method (or methods) chosen is determined by how advanced the cancer is, whether it has spread outside the prostate, and the overall health of the patient.

- Surgery
- Radical Prostatectomy (complete removal of the prostate gland) -cancer is confined to the prostate alone, which can be done multiple ways:
- Open Surgery: a large incision is made in the abdomen or the perineum (the area between the rectum and the scrotum) to access the prostate.
  - a. Laparoscopic Surgery: several specialized cameras and tools are used to see inside the body through small incisions.
  - b. Robotic-assisted Laparoscopic Surgery: the surgeon controls very precise robotic arms to perform laparoscopic surgery.
- Radiation Therapy
- Hormone Therapy- a drug (or combination of drugs) that affects androgens in the body The classes of drugs used in prostate-cancer hormone therapy include:
  - a. Luteinizing hormone-releasing hormone (LHRH) analogs, LHRH agonists, and LHRH antagonists, which prevent the testicles from making testosterone.
  - b. Antiandrogens, which block the action of androgens in the body.
- Other androgen-suppressing drugs, which prevent the adrenal glands from making testosterone
- Another hormone-therapy option is orchiectomy, the surgical removal of the testicles.
- Chemotherapy
- Immunotherapy
- High-Intensity Focused Ultrasound (HIFU)

### 5.2. Herbal treatment

*Bridelia ferruginea* (leaves), *Momordica charantia* (leaves), *Trichilia monadelpha* (bark) and *Zingiber officinale* (rhizome)

### 6. Prevention and control

- Regular, decaf, half-caf, coffee
- Intake of trans-fatty acids: increase inflammation and insulin resistance, both of which may play a role in prostate cancer
- Avoid commercially baked doughnuts and cookies, as well as packaged baked goods containing hydrogenated oil
- Eat more cooked tomato products (lycopene, more potent after they're cooked)
- Regular exercise (playing tennis, running, swimming, or biking, etc.)
- Increase intake of omega-3 fatty acids DHA and EPA (fish oil)

### 7. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## N° 25: LEUKAEMIA

### 1. Description

Leukaemia is the uncontrolled production of white cells at different stages of maturation. There are two main types of leukaemia depending on the type of white cell affected. These are lymphoid leukaemia and myeloid leukaemia. Each can further be divided into acute (where the patient falls suddenly ill) and chronic (where the patient may have been harboring the disease for months and occasionally years without knowing). Leukaemia may therefore present as Acute Myeloid Leukaemia (AML) and chronic myeloid leukaemia (CML). CLL is commonest in children especially boys, CLL is commonest in the elderly, AML and CML cut across all age groups and sexes.

### 2. Causes

- Usually no cause in any particular case
- Viruses e.g. Human T Lymphotropic Virus Type 1 (HTLV-1) and Epstein Barr Virus (EBV)
- Chemicals e.g. alkylating agents such as Melphalan
- Radiation

### 3. Symptoms

#### **Acute leukaemia:**

- Fever
- Easy fatigability
- Bruising tendencies
- Bone and joint pain especially in children

#### **Chronic leukaemia**

- Asymptomatic
- Dragging sensation left side of abdomen
- Easy satiety
- Weight loss
- Generalized itch
- Lymph nodal swellings

### 4. Signs

#### Acute leukaemia

- Pallor
- Fever
- Skin and mucosal haemorrhages
- Gum hypertrophy (AML subtype 5)
- Firm, rubbery, non-tender lymph nodes (lymphoid leukaemia)
- Splenomegaly

#### Chronic leukaemia

- Splenomegaly, often massive in CML
- Generalized lymph node enlargement in CLL

### 5. Investigations

- FBC and blood film comment
- Chest X-ray
- Bone marrow aspirate and trephine biopsy
- BCR-ABL rearrangement in ALL and CML

## 6. Treatment

Treatment objectives:

- To aim for a cure for ALL in children
- To aim for a cure for good prognostic cases of ALL in adults
- To achieve remission and prolong good quality life in AML
- To control white cell counts and symptoms and prolong good quality life in CML

The main orthodox treatment approaches are:

- Chemotherapy
- Radiation Therapy
- Biologic Therapy

### Herbal treatment

- Curcumin (turmeric), green tea, olive leaf, Ginseng, peels of citrus fruit
- *Ganoderma lucidum*, *Silybum marianum*, *Solanum sp.*, *Hedyotus diffusa*, Graviola fruit, *Vitex negundo*
- Watchful waiting or careful observation in CLL
- Good hydration

## 7. References

Health Encyclopedia - Diseases and Conditions.  
<http://www.healthscout.com/nav/ency/1/main.html>

## **N° 26: DIARRHOEA**

### **1. Description**

Diarrhoea means passing frequent, loose, watery stools 3 or more times in a day. Diarrhoea is often accompanied by vomiting. It is very common in children. The commonest cause in this age group is viral. There is therefore usually no need to prescribe antibiotics. Fluid loss occurs quickly in children because of their size. If this is not corrected it may result in dehydration which can be fatal. In children, other diseases like malaria, pneumonia, ear infections, urinary infections, may cause diarrhoea. Examine the child fully to make sure there is no obvious cause for the diarrhoea. The presence of a fever usually indicates an underlying cause. Never take the complaint of diarrhoea lightly. Always ask how many times that day and the day before the patient has been to the toilet, and the texture of the stools. To one person who usually passes stool once in three (3) days, a motion every day seems like diarrhoea, but to another person this is normal. Giving antibiotics may cause or prolong the diarrhoea except in special circumstances (see below). Malnutrition causes diarrhea, which in turn also causes malnutrition, setting up a vicious cycle. Never give enemas or laxatives to patients with diarrhoea.

### **2. Causes**

- Viral e.g. Rotavirus
- Bacterial e.g. Shigella
- Protozoal e.g. Amoebae
- Side effects of some medications e.g. Penicillins

### **3. Symptoms**

- Frequent watery stools
- Bloody or mucus in the stool
- Presence of fever
- Reduced urine output
- Associated vomiting

### **4. Signs**

- Dehydration

### **5. Investigations**

- FBC
- Blood film for malaria parasite
- Stool routine examination
- Stool for culture and sensitivity
- Blood urea and creatinine

### **6. Treatment**

Treatment objectives:

- To prevent dehydration: this is very important since so much of the child's body fluid is being lost through the stool and vomiting
- To replace lost fluid: as much fluid as goes into the stools should be given to the child to drink for replacement
- To maintain nutrition: mothers tend not to give a child who has diarrhea anything or very little to eat, at a time when he needs all the food he can get! Continue to feed as much as can be tolerated
- To maintain personal hygiene: or else you end up taking the germs from the stools, back into the mouth, continuing the diarrhea you are trying to stop
- To eliminate infecting organisms where appropriate

### **Herbal treatment**

- Ocimum gratissimum (leaves), Psidium guajava (leaves), Alchornea cordifolia (leaves) or;
- Bridelia ferruginea, Ocimum gratissimum (leaves), Alchornea cordifolia (leaves) or;
- Bridelia ferruginea (leaves), Adansonia digitata (stem bark), Alchornea cordifolia (leaves)
- Keep surroundings clean
- Improve personal hygiene e.g hand washing after toilet

### **7. Prevention and control**

To avoid developing diarrhea from food poisoning, consider:

- washing the cooking and food preparation areas more frequently
- serving food immediately
- refrigerating leftovers promptly
- thawing food in the refrigerator

Traveler's diarrhea can also be prevented. If you are planning a long vacation to a developing country, consider:

- asking your doctor if you can begin an antibiotic treatment before you leave. This will greatly reduce your risk of developing traveler's diarrhea.
- avoiding tap water, ice cubes, and fresh produce likely washed with tap water. Drink bottled water and eat cooked food only.

If you are suffering from diarrhea as the result of a viral or bacterial infection, you can take the following actions to prevent spreading your infection to others:

- Wash your hands more frequently.
- Use soap to wash your hands for 20 seconds.
- Use hand sanitizer when washing your hands is not possible.

### **8. References**

Health Encyclopedia - Diseases and Conditions.  
<http://health.yahoo.net/health/diarrhoea>

## N° 27: PEPTIC ULCER DISEASE

### 1. Description

Peptic ulcer may be duodenal or gastric. Duodenal ulcers are more common and occur more often in younger adults. Gastric ulcer usually occurs after middle age.

### 2. Causes

- Excessive secretion of gastric acid
- Inadequate protection of the lining of the stomach and duodenum against digestion by acid and pepsin
- *Helicobacter pylori* (*H. pylori*) infection
- Medicines e.g. non – steroidal anti-inflammatory drugs (NSAIDs), corticosteroids

### 3. Symptoms

- Abdominal pain
  - a. May be a minor discomfort, gnawing, burning, dull ache or very severe pain
  - b. Typically in the epigastrium or right hypochondrium
  - c. Occasionally high up behind the sternum or low down around the umbilicus
  - d. In duodenal ulcer, typically comes on when the patient is hungry and may wake the patient up in the middle of the night.
  - e. In gastric ulcer, it is typically worsen by food
  - f. Is relieved by alkalis and food in duodenal ulcer
- Vomiting may occur in both duodenal and gastric ulcers

### 4. Signs

- Tenderness in the epigastrium, right hypochondrium or umbilical region during an attack

### 5. Investigation

- Haemoglobin
- Oesophago-gastro-duodenoscopy
  - a. With biopsy for histology and staining (for *H.pylori*)
  - b. With urease test (for *H.pylori*)
- Barium meal in the absence of endoscopy
- Stool examination to exclude intestinal parasites

Complications of gastric ulcer include perforation, gastric outlet obstruction and haemorrhage that does not respond to conservative measures.

### 6. Treatment

Treatment objectives:

- To relieve pain and reduce gastric acid secretion
- To promote healing of the ulcer
- To eradicate *H.pylori* of the ulcer
- To prevent recurrence of the ulcer
- To avoid complications

Treatment will depend on the underlying cause of your ulcer. If tests show that you have an *H. pylori* infection, a combination of medication will be prescribed:

- antibiotics—medications that help kill infections
- proton pump inhibitors (PPIs)—medications that help reduce stomach acid
- over-the-counter PPI (such as Prilosec or Prevacid)
- Acid blockers (like Zantac or Pepcid)

### **Herbal treatment**

- *Aloe vera* juice, *Euphorbia hirta* (leaves), *Momordica charantia* (leaves) and *Ximenia americana*
- Avoid smoking and alcohol intake
- Avoid foods that aggravate the pain
- Allay anxiety and stress
- Surgery-indications for surgery:
  - a. Chronicity-crippling periodic attacks
  - b. Economic factors which make it difficult for the the patient to persevere with medical treatment

### **6. Prevention and control**

Certain lifestyle choices and habits can reduce your risk of developing peptic ulcers. These include:

- quitting smoking and other tobacco use
- eating a healthy diet rich in fruits, vegetables, and whole grains
- not drinking more than two alcoholic beverages a day
- not mixing alcohol with medication
- washing your hands frequently to avoid infections
- limiting your use of ibuprofen, aspirin, and naproxen sodium

### **7. References**

<http://health.yahoo.net/health/peptic-ulcer>

## N° 28: INSOMNIA

### 1. Description

Insomnia is the inability to obtain adequate sleep, irrespective of whether the patient has trouble getting to sleep, suffers frequent nocturnal arousals, or awakens too early. Assessing a complaint of sleep disorders requires a thorough history and clinical examination and specific sleep-wake history. Insomnia may suggest an underlying medical, psychological, psychiatric (especially depression) or environmental problem.

### 2. Causes

- Medicines e.g. Ephedrine, phenylephrine
- Caffeine – containing beverages e.g. coffee, tea
- Alcohol
- Drugs of abuse e.g. cocaine, marijuana, amphetamines
- Underlying medical, psychological and environmental factors
- Anxiety disorder
- Depression

### 3. Investigation

- FBC
- LETs
- BUN and creatinine
- Sleep study

### 4. Treatment

When lifestyle changes and behaviour therapies aren't relieving the symptoms of insomnia, doctors will often turn to medication. Doctors don't generally recommend relying on prescription sleeping pills for more than a few weeks, as they can become addictive. Some of the most prescribed brand name sleep medications include Ambien, Lunesta, Rozerem, and Sonata.

#### Herbal treatment

- *Lippia multiflora* (leaves), *Cymbopogon citratus* (leaves) and *Hibiscus sabdarifa* (calyx)
- *Valeriana officinalis*
- Herbal teas made from chamomile, hops, passion flower, or St. John's Wort
- Educate patients to adopt a lifestyle that promotes good sleep
- Have regular exercise
- Avoid strenuous exercise close to bedtime
- Establish good sleep hygiene i.e. a routine for 'winding down', going to bed and preparing for sleep
- Avoid alcohol and caffeine – containing beverages close to bedtime
- Ensure a comfortable and quiet environment for sleep
- Relaxation therapy
- Stimulus control treatment of sleep by going to bed only when sleepy and to get out of bed if sleep is interrupted.

### 5. Prevention and control

- Prevention techniques, such as maintaining a healthy lifestyle, learning how to manage stress, and cutting out bad habits can have a significant impact on promoting quality sleep. In addition the following may be helpful:
- Stick to your sleep schedule-when possible, try to go to bed and get up at the same time every day; try not to take naps during the day, and if a daytime nap is needed, keep it under 30 minutes in the early afternoon
- Don't stay in bed when you're not sleeping
- Resist the urge to linger in bed if you wake up feeling rested; if you can't sleep, don't lie there staring at the ceiling for hours on end; instead, if it's been more than 15

minutes of sleeplessness, get out of bed and do something relaxing, such as meditation or reading, until you feel sleepy

- Relax
- Try taking a warm bath or have your partner give you a massage before going to bed
- Create a soothing bedtime ritual such as listening to soft music, doing gentle yoga, or reading. Acupuncture
- Create seclusion
- Make your bedroom conducive to sleep
- Close the door when you go to sleep and run a fan (if you like) to help eliminate outside noises. Keep your bedroom cooler at night than in the day, and as dark as possible.
- Exercise for 20-30 minutes every day, five hours or more before bedtime
- Avoid caffeine, alcohol, and nicotine
- Skip late-night snacks and meals
- Maintain a healthy diet, and avoid foods that are high in saturated fat, which may cause heartburn and indigestion
- Eliminate pain
- Hide the time—The less you know what time it is—particularly when you wake in the middle of night—the better you're likely to sleep
- Know what's causing your sleepless nights

## **6. References**

<http://health.yahoo.net/health/insomnia-prevention>

## **N° 29: DEPRESSION**

### **1. Description**

Depression is a mood disorder. It occurs in all age groups although symptoms may be different in children. It has a tendency to recur, although some may become bipolar, when episode of mania may also be observed. Some patients present mainly with bodily symptoms, sleep disturbances as well as morbid dreams and “worrying excessively”. They hardly mention a depressive mood unless they are asked specifically, and even then many deny or trivialize it as a consequence of acknowledged symptoms like headaches or insomnia. Most cases of suicide or attempted suicide are from depression; one should not dismiss or take for granted statements made by patients such as ‘I want to die, ‘life is not wealth living’, ‘I am fed up with life’. All cases of attempted suicide should be referred to a psychiatrist after initial management of the presenting complication e.g. self inflicted accident or poison. Recurrent depression or unipolar depression is treated differently (with antidepressants) from bipolar depression, which responds more to mood stabilizers

### **2. Causes**

- Genetic
- Familial
- Environmental
- Psychosocial factors
- Endocrine disorders e.g. hypothyroidism, Cushing’s syndrome

### **3. Symptoms**

The diagnoses criteria for major depression relies on the presence of at least five of the following symptoms experienced every day for at least two weeks.

- Depressed mood
- Loss of interest or pleasure
- Significant weight loss or gain
- Insomnia or sleeping too much
- Psychomotor agitation or retardation
- Fatigue or loss of energy
- Feelings of worthlessness or excessive guilt
- Impaired thinking or concentration ; indecisiveness
- Multiple bodily complaints
- Suicidal thoughts/thoughts of death
- Hallucinations /delusions of morbid themes in severe cases

#### **In children**

- Truancy or refusal to go to school
- Poor school performance
- Bedwetting in a previously ‘dry’ child
- Odd behavior, aggression or defiance
- Irritability
- Appetite changes
- Some of the ‘adult’ symptoms

### **4. Signs**

- Depressed mood
- Evidence of weight loss or obesity
- Agitation or retardation
- Hallucinations

### **5. Investigations**

- FBC
- BUE and creatinine

- FBS
- Thyroid function and cortisol levels if indicated

## **6. Treatment**

- Treatment objectives
- To reduce symptoms
- To prevent disruption to normal life at home, work or school
- To prevent suicide

### **Herbal treatment**

- Cola nitida (cotyledons), Aframomum melegueta (seeds) and Zingiber officinale (rhizome)
- St. John's Wort, Kava kava

## **7. References**

<http://health.yahoo.net/articles/depression/depression-facts>

## N° 30: SCHIZOPHRENIA

### 1. Description

Schizophrenia is probably the most severe and potentially disabling form of mental illness and occurs in about 1% of the people in every community worldwide. Schizophrenia may present as an acute or chronic illness. The clinical features include characteristics of 'positive' or 'negative' symptoms, deterioration in social, work or interpersonal relationships and continued evidence of disturbed behaviour for at least 6 months. The clinical features may be numerous and can change over time. Psychosis associated with substance abuse and mood disorders with psychotic features may mimic schizophrenia.

### 2. Causes

- Cause is largely unknown
- Possible causes include:
  - a. Genetics
  - b. Birth defects
  - c. Environmental triggers
  - d. Illicit drugs

### 3. Symptoms

'Positive' symptoms

- Hallucinations
- Delusions
- Incoherent speech or illogicality
- Odd or disorganized behavior
- Disorders of thought possession

'Negative' symptoms

- Poverty of speech or of content of speech
- Apathy
- Reduced social contact or withdrawal
- Flattened effects (showing little facial expressive responses)
- Delusions may be persecutory (undue suspicion) or totally bizarre like being controlled or being made to feel emotions or sensations.
- Hallucinations may involve any of the senses but auditory ones are most common; experienced as voices speaking clearly or in mumbled tones.
- Disorders of thought possession include feeling of the patient's thoughts being accessible to others.
- Motor disorders often occur but are not essential for diagnosis.

### 4. Treatment

Treatment objectives:

- To abolish symptoms and restore functioning to the maximum level possible
- To reduce the chances of recurrence
- Non-pharmacological treatment

Treatments include electroconvulsive therapy (ECT), sometimes called "shock treatment," and, tranquilizing antipsychotic medications, such as the phenothiazines and more recently, a new generation of medications (known as atypical antipsychotics), which tend to have fewer side effects than older medications.

#### Herbal treatment

- *Rauwolfia vomitoria* (roots), *Lippia multiflora* (leaves), *Hoslundia opposita* (leaves), *Zingiber officinale* (rhizome) and *Xylopia aethiopica* (fruits)
- Vitamin D- may play a role in reducing inflammation and boosting immune system function

- Fish Oil- a natural source of omega-3 fatty acid
- Glycine
- Diet Management- a healthful diet, characterized by low-fat, high-fiber, whole grains, fresh fruits and vegetables, and fatty fish (a good source of omega-3 fatty acids)

## **5. References**

<http://health.yahoo.net/health/schizophrenia/alternative-treatments>

## **N° 31: ALCOHOLISM**

### **1. Description**

Dependence on alcohol and development of related problems is a common and often unrecognized disorder. Alcoholism is often associated with many physical health problems. The greatest problem is the recognition and diagnosis of alcoholism since affected individuals are often in denial of their problem. They under-declare the amount and frequency of alcohol consumption and usually appear in hospital only with complications. The coexistence of other psychiatric illnesses like Depression with alcoholism is common.

### **2. Causes**

Genetic, familial and environmental factors are all important.

### **3. Symptoms**

These may be observed by relatives or co-workers

- Recurrent use of alcohol resulting in failure to fulfill major obligations at work, school or home.
- Recurrent use in situations where it is physically hazardous e.g. driving
- Continued use despite having persistent or recurrent social, legal or interpersonal problems caused by effects of alcohol
- Development of tolerance
- Withdrawal syndromes
- Taking increasingly larger amounts over longer periods than intended
- Previous unsuccessful attempts at stopping

### **4. Signs**

- Reddening
- Smooth red palms
- Painless enlargement of liver
- Bruises from minor accidents etc.
- Parotid gland enlargement

### **5. Investigations**

- Mean Corpuscular Volume(MCV) is increased in majority of alcoholism patients
- Liver Enzymes(AST, ALT) are often increased
- Serum Gamma Glutamyltransferase (GGT) is increased in majority of alcoholics
- Ultrasound scan of liver

### **6. Treatment**

Allopathic treatment of alcoholism has two parts. The first phase is the treatment of acute effects of alcoholism, called detoxification. The second phase involves learning how to live with the disease of alcoholism.

Treatment objectives:

- To treat complications
- To achieve total abstinence from alcohol use

#### **Herbal treatment**

- Alternative treatments can be a helpful adjunct for the alcoholic patient once the medical danger of withdrawal has passed. Because many alcoholics have very stressful lives (because of, or leading to, the alcoholism), many of the treatments for alcoholism involve dealing with and relieving stress. These include massage meditation, and hypnotherapy. Others include acupuncture, biofeedback, behavioral therapy, motivational enhancement therapy, and aversion therapy
- Use of nutritional supplements, such as vitamins A, B complex, and C; certain fatty acids; amino acids; zinc; magnesium; and selenium

- Supplements that support antioxidant, detoxifying, restorative and corrective deficiencies
- Herbal treatments include milk thistle (*Silybum marianum*), which is thought to protect the liver against damage. Other herbs are thought to be helpful for the patient suffering from withdrawal. Some of these include the antidepressive properties of lavender (*Lavandula officinalis*), the calming and restorative nerve tonifying effects of skullcap (*Scutellaria lateriflora*), chamomile (*Matricaria recutita*), and valerian (*Valeriana officinalis*), the stimulating and GI effects of peppermint (*Mentha piperita*), and the bladder aid, yarrow (*Achillea millefolium*).
- *Cassia occidentalis*, *Phyllanthus fraternus*, *Azadiractha indica* and *Moringa oleifera*

## 7. References

<http://health.yahoo.net/galecontent/alcoholism/5>

## N° 32: ANXIETY DISORDERS

### 1. Description

Anxiety is a common symptom that occurs in all psychiatric disorders including depressive illness and most psychoses. Some patients have a mixture of anxiety and depressive symptoms, but pure states exist. Due to the similarity of symptoms, it may be difficult to differentiate an anxiety state from minor depressive illness. Anxiety may also significantly overshadow many serious illnesses. It may be worthwhile to exclude any underlying physical diseases especially hyperthyroidism, cardiac disease or hypertension. Although there are various forms of anxiety disorders (generalized anxiety disorder, panic disorder, phobias, obsessive compulsive disorder, acute stress disorder, post traumatic stress disorder), the commonest seen in generalized anxiety disorders are panic disorders.

### Generalised Anxiety Disorders

#### 1. Description

In this condition, there is excessive anxiety and worry about events or activities, such as performance at school or work, occurring on most days for at least 6 months.

#### 2. Causes

- LIFE experience
- Environmental factors
- Personality
- Genetics

#### 3. Symptoms

Excessive anxiety and worry occurring on most days, for at least 6 months

The anxiety or worry is associated with at least 3 of the following

- Muscle tension (often reported as pain in various parts like neck, trunk or headaches)
- Crawling and burning sensation around the body
- Restlessness or feeling on edge
- Being easily fatigued
- Difficult concentrating or mind going blank
- Irritability
- Sleep disturbance (difficulty falling asleep or frequent waking)
- Palpitation

#### 4. Signs

- Restlessness
- Sweating
- Anxious mood
- Tachycardia

#### 5. Investigations

No laboratory tests confirm the diagnosis. However, exclude underlying conditions, especially hyperthyroidism, pheochromocytoma, cardiac arrhythmias

#### 6. Treatment

Treatment objectives:

- To reduce anxiety
- To attain relief of somatic symptoms
  - a) Psychotherapy
  - b) Medication
  - c) Lifestyle Changes
- getting an adequate amount of sleep (about eight hours a night)
- exercise regularly

- devoting time to stress relief
- avoiding unnecessarily stressful situations
- career change, if anxiety is focused around work

### **Herbal treatment**

- Gossypium arboreum (leaves), Lippia multiflora (leaves), Hoslundia opposita (leaves)
- Eat a Balanced Diet
- Drink More Water
- Limit Your Caffeine
- Get Regular Exercise
- Massage Your Muscles
- Meditation
- Nutritional supplements and herbs include:
  - a. vitamin B12
  - b. fish oil
  - c. chamomile
  - d. kava root
  - e. inositol
  - f. St. John's Wort

### **7. Prevention and control**

- Stress relief
- Proper diet
- Keeping a journal- to track moods, stress, and anxiety
- Avoiding unhealthy substances

While tobacco, drugs, and alcohol are often called stress relievers, using them actually damages the body, making it harder for it to handle stress

### **8. References**

<http://health.yahoo.net/health/anxiety-treatments>

## N° 33: BOILS

### 1. Description

A boil or furuncle is a deep bacterial infection of the hair follicles. A more superficial infection is termed folliculitis and a group of boils in an area is termed a carbuncle. Patients with recurrent boils or carbuncles should be screened for diabetes mellitus and/or immunodeficiency.

### 2. Causes

Infection of the skin with staphylococcus aureus

### 3. Symptoms

- Single or multiple swellings on the skin which may discharge pus
- Painful swellings on the skin

### 4. Signs

- Purulent swellings on the skin in single or multiple areas of skin
- Swellings may be warm and/or tender

### 5. Treatment

Treatment objectives:

- To treat infection
  - To relieve pain
  - To identify and treat any predisposing condition
- a) Compresses- boils are usually treated with application of antibiotic creams, following the application of hot compresses. The compresses help the infection to come to a head and drain and are an important part of the treatment regime.
  - b) Carbuncles and furunculosis are usually treated with oral antibiotics as well as antibiotic creams or ointments
  - c) Boils or carbuncles that are very large or that do not resolve may be opened with a sterile needle or surgical knife to allow the pus to drain
  - d) Resveratrol, which is a phytoalexin, appears to be highly effective in treating boils and other skin infections in humans caused by *S. aureus*.

#### 5.1. Herbal treatment

*Bidens pilosa* (leaves), *Rauwolfia vomitoria* (root) and *Alchornea cordifolia* (leaves)

### 6. Prevention and control

To minimize the risk of developing bacterial skin infections the skin should be kept clean; to avoid spreading the infection, washcloths, towels, and facial cosmetics should not be shared with others. A healthy diet should be maintained and allergic foods should be eliminated. This will ensure that the immune system will be supported, and that boils will be prevented.

### 7. References

<http://health.yahoo.net/search?q1=boils>

## **N° 34: GASTROESOPHAGEAL REFLUX DISEASE**

### **1. Description**

Gastroesophageal reflux disease (GERD) is caused by backflow of gastric or duodenal contents or both past the lower oesophageal sphincter into the oesophagus without belching or vomiting.

The disease is classified into two groups based on endoscopy findings as non-erosive gastroesophageal disease (non erosive GERD) and erosive gastroesophageal disease (erosive GERD). Failure to treat may result in oesophagitis, ulceration, strictures and rarely adenocarcinoma.

### **2. Causes**

- Hiatus hernia
- Increased intra-abdominal pressure e.g in pregnancy
- Obesity
- Long term use of nasogastric tube
- Agents that decrease lower oesophageal sphincter pressure e.g. alcohol, cigarettes, anticholinergics (e.g. Propantheline bromide) , other drugs – Morphine , Diazepam and Meperidine
- Children with chronic neurological disease

### **3. Symptoms**

- Heartburn – worsens with vigorous exercise , bending forward , lying; relieved by antacids and sitting upright
- Dyspepsia
- Early satiety
- Retrosternal and epigastric pain:mimics angina pectoris radiating to neck, jaw and arm; the pain is worse on bending down e.g. sweeping Pain on swallowing
- Nocturnal regurgitation : wakes patients up with coughing , choking and filling of the mouth with saliva
- Nocturnal asthma

In children:

- Failure to thrive
- Forceful regurgitation which may lead to aspiration pneumonia
- Iron deficiency anaemia

### **4. Signs**

Epigastric tenderness occasionally

### **5. Investigations**

- Barium swallow with fluoroscopy (especially useful in children)
- Oesophago-gastro-duodenoscopy (OGD) or upper gastro-intestinal track endoscopy
- Abdominal ultrasound (to exclude other diseases)

### **6. Treatment**

Treatment objectives:

- To relieve symptoms
- To prevent complications

- a) Medication-include everything from antacids to H<sub>2</sub> receptor blockers or proton pump inhibitors
- b) Nissen fundoplication-surgical procedure, in which a portion of the stomach is lifted over the junction between the stomach and esophagus to increase pressure on the lower esophageal sphincter (LES). This prevents stomach acids from entering the esophagus. Although highly effective, the Nissen fundoplication may result in increased bloating, flatulence, and trouble swallowing.

### **6.1. Traditional treatment**

- *Ficus cordata* (stem bark), *Spathodea campanulata* (stem bark) and *Zingiber officinale* (rhizome)
- Chinese honeysuckle flower
- Melatonin
- Peppermint
- Hypnosis, massage, and relaxation techniques such as guided imagery have been found to be helpful for some people

### **7. Prevention and control**

- Standard Treatments -some of the best treatments for GERD can be lifestyle changes such as quitting smoking, losing weight, or eating smaller meals more frequently
- Avoid foods such alcohol, citrus fruits, caffeinated and carbonated beverages, fried or fatty foods, and spicy foods, including garlic and onions

### **8. References**

<http://health.yahoo.net/health/gerd/alternative-treatment>

## N° 35: GINGIVITIS AND STOMATITIS

### 1. Description

These are inflammatory conditions involving the gums and mucosa of the oral cavity.

### 2. Causes

- Bacterial, from poor oral hygiene
- Viral e.g. herpes simplex, measles
- Vitamin deficiency
- Chemicals allergic reaction

### 3. Symptoms

- Sore mouth
- Bleeding gums especially after brushing
- Pain while swallowing
- Cracks at the corners of the mouth
- Poor appetite
- Nausea

### 4. Signs

- Hyperaemic buccal mucosa and gums
- Ulcers may be present

### 5. Investigations

FBS

Mouth swab

### 6. Treatment

- Treatment objectives
- To relieve pain and inflammation

To treat gingivitis you must practice proper oral hygiene. You should also cut back on any smoking and control your diabetes. Other treatments include deep cleaning your teeth, medications, and surgery.

- Antibiotic mouthwash containing chlorhexidine can be used to disinfect the mouth.
- Time-release antiseptic chips containing chlorhexidine can be inserted into pockets after root planing.
- Antibiotic microspheres made with minocycline can be inserted in pockets after scaling and planing.
- Oral antibiotics can be used to treat persistent areas of gum inflammation.
- Doxycycline, an antibiotic, can help keep enzymes from causing tooth damage.
- Surgery
- Flap
- Bone and tissue grafts

### Herbal treatment

*Adenia lobata* (leaves), *Alchornea cordifolia* (leaves) and *Plumbago zeylanica* (leaves)

### 7. Prevention and control

Gingivitis can be prevented by proper and consistent oral hygiene. Make certain to eat a balanced diet and visit the dentist regularly. Brush your teeth twice daily with fluoride toothpaste. Floss your teeth every day.

### 8. References

<http://health.yahoo.net/health/gingivitis>

## N° 36: ORAL THRUSH

### 1. DESCRIPTION

It mainly affects the very young , the very old or those whose immunity is impaired. It occurs more frequently in HIV/AIDS patients, the malnourished, diabetics, patients on long term antibiotics and corticosteroids.

### 2. CAUSES

- *Candida albicans*

### 3. SYMPTOMS

- White patches in the mouth
- Burning sensation in the mouth.
- Difficulties in swallowing
- Breast fed babies may refuse to suck

### 4. SIGNS

- White patches in the mouth

### 5. INVESTIGATIONS

- FBC
- Fasting blood glucose
- HIV status indicated

### 6. TREATMENT

Treatment objectives

- To eradicate infections
- To identify and treat any underlying condition

Treatment for oral thrush varies depending on age and overall health. The purpose of treatment is to prevent the growth and spread of the fungus.

Treatment for oral thrush may consist of:

- clotrimazole lozenge (an antifungal medication that you leave in your mouth until it dissolves)
- nystatin (an antifungal mouthwash that you swish around in your mouth and then swallow)
- fluconazole or itraconazole (oral antifungal medications used for cases that are resistant to initial treatments or for patients who have HIV/AIDS)
- amphotericin B (an oral or intravenous drug used to treat patients with very resistant infections or whose infection has spread to other parts of the body)

Your at-home regimen for treating oral thrush should include:

- brushing with a soft toothbrush to avoid scraping the lesions
- replacing your existing toothbrush regularly until the oral thrush clears up
- not using mouthwashes or sprays
- using a 3 percent hydrogen peroxide solution or saltwater mixture to rinse your mouth
- maintaining appropriate blood sugar levels if you have diabetes
- eating unsweetened yogurt with *Lactobacillus acidophilus* or taking acidophilus capsules to help restore and maintain healthy levels of “good” bacteria

When a breastfeeding infant has oral thrush, both the mother and infant should be treated to prevent a cycle of reinfection. Treatment in these cases may include:

- using an antifungal medication for the baby and an antifungal cream for the mother’s breasts
- rinsing pacifiers, bottle nipples, and all pieces of a breast pump in a half water/half vinegar solution and allowing the items to air dry
- using nursing pads to prevent the fungus from spreading to your clothes

## **Traditional treatment**

### **7. Prevention and control**

- Practice good oral hygiene by brushing and flossing your teeth daily. This is especially important if you have diabetes or wear dentures.
- Rinse out your mouth after using a corticosteroid inhaler.
- Add acidophilus capsules or yogurt with *Lactobacillus acidophilus* to your diet when you are taking prescribed antibiotics.
- Promptly treat a vaginal yeast infection, especially if you are pregnant.
- Avoid foods that are high in sugar and/or yeast, since they could encourage the fungus that causes oral thrush.

### **8. References**

<http://health.yahoo.net/health/thrush>

## **N° 37: MALNUTRITION**

### **1. Description**

Food is necessary for proper growth, development of the body and maintenance of health. A normal and properly balanced diet, consists of food that has sufficient amounts of protein necessary for growth and maintenance, carbohydrates and fats necessary for energy and vitamins and minerals for protection against disease. Malnutrition occurs when there is a deficiency in intake of some or all of the above nutrients. It is most commonly seen in children less than five years, particularly after weaning. In many cases, the malnourished child is brought to the health unit because of other complaints such as diarrhoea, vomiting, fever, worms or cough. In adults, malnutrition frequently occurs in association with chronic alcoholism. Malnutrition can result in a breakdown of the child's or adult's ability to fight disease and infection. An infection in a malnourished individual may thus become very severe and result in death. A child suffering from malnutrition may have features of marasms, kwashiorkor or both [marasmic-kwashiorkor]. These children lack both protein and sources of energy [protein Energy Malnutrition, PEM]. Protein Energy Malnutrition (PEM) is divided into three stages using weight/age, weight/height and upper arm circumference. The mild form of PEM is the commonest type in Ghana.

#### **Mild PEM**

- Weight for age: <80% but >70%
- Weight for height: 70-80%
- Mid upper Arm circumference: 12.5-13.5cm
- The child is thin with some muscle wasting
- The child plays less because of lack of energy.

#### **Moderate PEM**

- Weight for age : <70% but > 60%
- Mid upper Arm circumference: 12.0-12.5cm
- Early signs of Kwashiorkor or marasmus may be present.
- The symptoms and signs are as in mild PEM but more pronounced

#### **Severe PEM**

- Weight for age : <60% of expected weight for age
- Weight for height : <70%
- Mid Upper Arm circumference: <12cm.
- In the stage there are signs of marasmus, kwashiorkor or marasmic-kwashiorkor.

### **2. Causes**

- Inadequacy of quality and/or quantity of food intake
- Social neglect
- Chronic illness and cancers
  - a. Infections and infestations(children):
  - b. Measles, pertussis HIV, pulmonary tuberculosis
  - c. Worm infestations
- Alcoholism (adults)

### **3. Symptoms**

- Weight loss
- Poor weight gain (marasmus)
  - a. May be noted as drop or flattening in weight on the "Road to Health " chart
- Body swelling (Kwashiorkor)
- Lack of energy
- Apathy
- Disinterest in food

## 4. Signs

### Marasmus

- Thin (reduced muscle bulk)
- Prominent bones
- Hanging skin folds especially over the buttocks
- Unusually alert
- Looks like an old man

### Kwashiorkor

- Thin and wasted arms
- Puffy face and legs due to oedema
- Brownish or reddish hair
- Flaky skin rash especially on the legs
- Sores on the oedematous parts of the body in severe cases
- Miserable and apathetic appearance
- Disinterest in food

## 5. Investigations

- FBC
- Urea and electrolytes
- Urine culture and sensitivity
- Chest X-ray
- HIV testing
- Gastric lavage for acid fast bacilli

## 6. Treatment

Treatment objectives:

- To correct the nutritional deficiency
- To prevent reoccurrence
- To check and correct complications
- Anaemia
- To identify and treat underlying infections and infestations
- To adequately manage chronic illness

### Herbal treatment

- *Launea taraxacifolia*, *Moringa oleifera*, *Cinnamomun zeylanica*, Soya bean or;
- Soya bean, *Moringa oleifera*, *Launea taraxacifolia* and *Cinnamomun zeylanica*

## 7. References

<http://health.yahoo.net/health/malnutrition>

## **N° 38: STROKE**

### **1. Description**

A Stroke or cerebrovascular accident is a rapidly developing focal (or global), disturbances of cerebral function lasting 24 hours or longer or leading to death, with no apparent cause other than a vascular origin. The risk factors for a stroke include hypertension, diabetes mellitus, cigarette smoking , cardiac arrhythmias , obesity, plasma lipid abnormalities, heart and peripheral vascular disease and excessive alcohol intake. Stroke are usually sudden in onset or may show progression over several hours or occasionally days. The site of the brain lesion causing the stroke usually determines the neurological presentation.

### **2. Causes**

- Cerebral infarction form
  - a. Thrombosis of the cerebral vessel
  - b. Embolism from a distant site (Atrial fibrillation)
- Intracerebral haemorrhage
- Subarachnoid haemorrhage

### **3. Symptoms**

- Weeakness of one side of the boby including face
- Inability to rise up from a sitting or lying position
- Sudden fall
- Loss of speech
- Severe headache and /or neck pain (subarachnoid haemorrhage)
- Unconsciousness in some patients
- Seizures

### **4. Signs**

- Paralysis of a limb and/or the face
- Initial flaccidity, but spasticity and exaggerated reflexes occur later
- Loss of one-half of visual field (Hemianopia)
- Loss of sensation of one –half of body(hemi-anaesthesia)
- Extensor plantar response
- Alteration of speech (dysarthria/dyspasia)
- Neck stiffness(in subarachnoid haemorrhage)

### **5. Investigations**

- FBC
- Blood glucose
- Serum lipid profile
- Blood urea, electrolytes and creatinine
- Uric acid
- ECG
- CT scan/MRI of the head
- Chest X-ray

### **6. Treatment**

Treatment objectives:

- To limit the progression area of brain damage
- To protect patients from the dangers of unconsciousness and immobility
- To treat the underlying cause if possible
- To institute measures to improve functional recovery
- To support and rehabilitate patients who survive with residual disability
- To prevent recurrence of cerebrovascular lesions

Treatment for a stroke should begin as soon as possible. The quicker emergency treatment begins, the greater the chance of preventing any lasting damage. Treatment depends on the type of stroke a person is having.

- Emergency treatment for ischemic stroke must start within 4.5 hours of the event. Treatment for an ischemic stroke—the most common kind that involves a blood clot in the brain—will be to break up the clot that is blocking or disrupting blood flow in the brain.
- One of the most common treatments doctors use during stroke emergencies is simple aspirin
- Other drugs designed to break up clots. These drugs can be injected via a catheter—or thin tube—through your arteries. The most common medication used to treat stroke is known as tissue plasminogen activator (tPA), and will help break up clot that has formed in the brain. Other oral drugs that may eventually be used to thin the blood and reduce risk of future stroke include clopidogrel, statins, and warfarin.

### **Herbal treatment**

*Phyllanthus fraternus* (leaves), *Allium sativum* (bulb), *Strophanthus hispidus* (roots) and *Momordica charantia* (leaves)

### **7. Prevention and control**

Preventing a stroke is all about taking care of the heart and blood. This means keeping good cholesterol high, and bad cholesterol low with diet, exercise, and avoiding some specific bad habits. Here are some ways to lower the risks for stroke:

- Eat a diet rich in fibre, whole grains, fresh fruits, and lots of vegetables
- Avoid foods that are processed, high in cholesterol, high in saturated fat, and loaded with sodium
- Exercise-thirty minutes of exercise a day can help
- Mind Your Blood Pressure-avoid sodium and get some regular exercise; eat a diet that is high in fruit, vegetables, and potassium
- Don't Smoke
- Limit Alcohol
- Control Chronic Conditions-if you suffer from high cholesterol, high blood pressure, obesity, or diabetes, then the more you actively manage your condition, the better chance you have of avoiding a stroke.

### **8. References**

<http://health.yahoo.net/health/stroke/prevention>

## N° 39: ECZEMA (DERMATITIS)

### 1. Description

Eczema is an itchy reaction of the skin to a number of factors, either exogenous (e.g. contact dermatitis) or endogenous (e.g. seborrhoea and atopy). Papules, blisters (vesicles, pustules and bullae) and oozing characterise the lesions when acute. There is thickening (lichenification), prominent skin lines and scaling chronic. There are three main types as follows:

#### Atopic eczema

This presents as remitting and relapsing itchy conditions of the face, wrists, ankles, cubital and popliteal fossae. Onset is in childhood often with a familial background of atopy (asthma, hay fever, eosinophilia and similar skin problem). Spontaneous resolution often occurs by teenage.

#### Seborrhoeic eczema and dandruff

This presents as a scaly weeping rash of the scalp, eyebrows, perinasal and periauricular skins; sometimes it presents as hypopigmented macules. It occurs in infancy, adolescence or adulthood. It may be associated with dandruff and *pityrosporum ovale* infection. Extensive forms are associated with immunosuppressive states, particularly AIDS.

#### Contact eczema

It may be an irritant (concentration dependent) or allergic (idiosyncratic) reaction to specific chemicals such as metals, rubber etc. In contrast to the endogenous types, the skin reaction is confined to the areas directly in contact with the offending chemical.

### 2. Causes

- Familial
- Atopy
- Reaction to metals, rubber, chemicals, drugs, foods etc
- Immunosuppression

Several factors can increase the risk of an eczema flare-up. These include fabrics that are rough to the touch, such as wool as well as harsh soaps, cleansers and detergents, and even cold weather that can dry out skin.

### 3. Symptoms

- Scaly weeping rash
- Hypo-pigmented macules
- Itching

### 4. Signs

- Erythema
- Vesicles
- Fissures
- Scale rash
- Lichenification (thickened skin)

### 5. Investigations

Closed patch testing (may be used for identification of allergens in contact eczema)

### 6. Treatment

Treatment objectives:

- To eliminate symptoms
- To identify and avoid predisposition factors

The most effective way to manage eczema symptoms is by taking medications, along with make some behavioral changes. Eczema drugs fall into several categories: antihistamines, corticosteroids, antibiotics and immunosuppressants. There are several medications available that can help control and prevent eczema outbreaks.

### **Herbal treatment**

- *Cassia nodosa* (leaves), *Cassia alata* (leaves) and *Hoslundia opposita* (leaves)
- Some natural treatments that may help with the eczema include:
  - a. Tea
  - b. Borage Oil
  - c. Evening Primrose Oil
  - d. Mind/Body Approaches-techniques that lower stress may reduce the risk of the eczema (meditation, yoga, progressive muscle relaxation or guided imagery)
  - e. Acupuncture
  - f. Aromatherapy helps promote relaxation and reduces stress, which can put you at greater risk of an eczema occurrence. Put a drop of water infused with essential oil such as chamomile or lavender onto your pillow at night can help ease stress and anxiety.

### **7. Prevention and control**

Behavioural changes can have a significant impact in reducing the likelihood of an eczema flare-up and they don't require any medication. There are several ways that can help keep eczema under control or at least reduce the severity of an outbreak:

- Avoid Scratching
- Try Rubbing Instead
- Reduce Stress
- Moisturize-Dry skin can trigger an eczema flare up and make the skin condition more uncomfortable
- Get Adequate Sleep
- Avoid Irritants

### **8. References**

<http://health.yahoo.net/health/eczema-prevention>

## N° 40: RHEUMATOID ARTHRITIS

### 1. Description

This is a chronic systemic autoimmune inflammatory disease characterised mainly by symmetrical inflammation of the synovial tissue of joints resulting in destruction of the joints and peri-articular tissues. It occurs more commonly in young and middle-aged women. The symptoms fluctuate widely with periods of remission and exacerbation. Other organs such as the lungs, kidney, eyes and the haematopoietic system may occasionally be affected. Rheumatoid arthritis should be treated as early as possible with disease modifying anti-rheumatic drugs (DMARDs) to control symptoms and delay disease progression.

### 2. Cause

Autoimmune disease

### 3. Symptoms

- Pain and swelling in small joints of the hands and wrists for several weeks
- Morning joint stiffness
- Fever
- Weight loss, lethargy, depression
- Polymyalgia-systemic illness with muscle pain, minimal joint involvement and explosive overnight joint pain

### 4. Signs

- Saddle-shaped fingers, often symmetrical
- Limitation of small joint movement
- Joint deformities e.g. ulnar deviation at wrists, finger deformities
- Carpal tunnel syndrome
- Synovitis swelling and tenderness over joints
- Anaemia – normocytic normochromic in character
- Rheumatoid nodules
- Muscle wasting around affected joints if long standing
- Dry eyes
- Peripheral sensory neuropathy
- Depression
- Cardiac and pulmonary involvement

### 5. Investigations

- Rheumatoid
- Antinuclear antibodies (ANA)
- FBC
- ESR
- X-ray of affected joints

#### 5.1. Herbal treatment

*Saba camorensis* (aerial parts), *Cassia sieberiana* (stem bark) and *Trichilia monadelpha* (stem bark)

### 6. References

[http://health.yahoo.net/health/rheumatoid arthritis](http://health.yahoo.net/health/rheumatoid%20arthritis)

## N° 41: OSTEOARTHRITIS

### 1. Description

This is a degenerative joint disease that damages the articular cartilage leading to reactive new bone formation. Weight bearing joints (hips, knees), cervical and lumbar spine and the metacarpo-phalangeal and distal-interphalangeal joints of the hands are commonly affected. Osteoarthritis is more common in females than males.

### 2. Causes

- Ageing
- Trauma
- Obesity

### 3. Symptoms

- Pain at initiation of exercise(walking)
- Morning stiffness which improve with exercise
- Diminution of joint movement

### 4. Signs

- Crepitus on moving affected joints
- Heberden 's nodes and deformed joints in the hands
- Joint swelling, warmth and effusions (knee especially)
- Osteoarthritis of cervical cancer and lumbar spine may lead to muscle weakness in hands and legs respectively (myelopathy)

### 5. Investigations

- FBC
- ESR-mildly elevated
- X-ray of affected joints-narrowing and irregularity of the space

### 6. Treatment

Treatment objectives:

- To relieve pain
- To prevent and manage deformities
- To educate patient

#### 6.1. Herbal treatment

*Entandophragma angolensis* (stem bark), *Cassia sieberiana* (stem bark), *Trichilia monadelpha* (stem bark) and *Morinda lucida* (leaf)

### 7. References

<http://health.yahoo.net/health/osteoarthritis>

## No 42: LIVER CANCER

### 1. Description

Hepatocellular carcinoma (HCC) is a primary malignancy of the liver cell and must be differentiated from malignancies elsewhere that metastasize to the liver. HCC occurs more commonly in men than in women and is often diagnosed several years after establishment of the initial causative condition. The disease has a poor prognosis resulting from early metastases to the lung, portal vein, per-portal lymph nodes, bone or brain and complications such as hepatic failure, variceal bleeding or tumour rupture with bleeding into the peritoneum. The tumour is often resistant to chemotherapy. Current strategies to prevent or treat hepatitis B and C infections and liver cirrhosis have a potential for reducing the prevalence of HCC in the long term.

### 2. Causes

- Alcoholism liver cirrhosis
- Chronic hepatitis B virus infection
- Chronic hepatitis C virus infection
- Chronic exposure to hepatic carcinogens e.g. Aflatoxin

### 3. Symptoms

- Jaundice
- Itching
- Weight loss
- Haematemesis
- Abdominal distension
- Right upper abdominal pain

### 4. Signs

- Jaundice
- Cachexia
- Hepatomegaly (irregular surface, multiple nodules, may be tender)
- Ascites
- Bruit over the liver

### 5. Investigations

- LFTs
- Blood level of alpha – fetoprotein
- Abdominal ultrasound scan
- Chest X-ray

### 6. Treatment

Treatment objectives:

- To relieve pain
- To relieve discomfort from gross ascites
- To prevent or treat hepatic encephalopathy

#### 6.1. Herbal treatment

*Morinda lucida* (leaves), *Tectonia regia* (leaves), *Phyllanthus fraternus* (leaves) and *Cathartus roseus* (leaves)

### 7. References

<http://health.yahoo.net/health/liver cancer>



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