

# **Clinical Tract**

**Module on**

# **Medical Terminology**

## **LEARNING OUTCOMES FOR COUNSELLORS AND DATA CAPTURERS**

After completion of this module the learner should be able to:

- Understand the medical terms discussed in this module and be able to explain it in lay man's terms.
- Explain the procedures discussed in layman's terms.

This module is aimed at staff without a medical or technical background to give them some insight into medical terminology used by staff and the procedures a patient may undergo.

# 1. MEDICAL TERMINOLOGY

## Meaning of specific words

Many words in medical terminology are from Latin origin. Quite often the name of the organ is combined with the disease affecting it.

### Central and peripheral

Central means towards the middle. An example is the central nervous system, meaning the brain. Peripheral means further away. An example is peripheral neuropathy, meaning a disease that affects the nerves to the arms and legs, away from the central part of the body.

### Hyper and hypo

Any word starting with “hyper” means too much; an example is hypertension (high blood pressure). Any word starting with “hypo” means too little; an example is hypotension (low blood pressure).

### When it ends with ...itis

Any word that ends with “itis” means inflammation or infection of that organ.

Examples:

Meningitis — infection of the sack around the brain

Encephalitis — inflammation or infection of the brain

Rhinitis — inflammation or infection of the nose

Sinusitis — inflammation or infection of the sinuses

Pharyngitis — inflammation or infection of the throat

Bronchitis — inflammation or infection of the upper airways

Pneumonitis — inflammation or infection of the lung

Pericarditis — inflammation or infection of the sack around the heart

Miocarditis — inflammation or infection of the muscle of the heart

Oesophagitis — inflammation or infection of the oesophagus

Hepatitis — inflammation or infection. Examples are virus infections and drug reactions.

Gastritis — inflammation or infection of the stomach

Gastroenteritis — inflammation or infection of the stomach and bowels

Dermatitis — inflammation or infection of the skin

### When it ends with ...opathy

Any word that ends with ...opathy means malfunction or weakness of that organ.

Encephalopathy — malfunction of the brain usually presenting with confusion

Cardiomyopathy — weakness of the muscle of the heart

Miopathy — weakness of the muscles in the body (usually arms and legs)

Neuropathy — malfunction of nerves, usually leading to weakness in the arms and legs

## **2. PROCEDURES**

### **X-Ray**

A picture of the chest is taken and printed on a special film. Bones show up white. Lungs and bowels, because they are filled with air, would be nearly transparent. Many diseases can be diagnosed on an x-ray. The doctor will request what part of the body should be x-rayed. It is very important that a woman mentions to the doctor if she thinks she might be pregnant, since X-rays can be dangerous for a foetus.

### **CT scans**

CT stands for computed tomography. It is a special kind of x-ray that visualizes the internal organs of the body. A computer is used to convert the x-rays into pictures. CT scans take pictures of the body at different points, rather like slices through a loaf of bread.

CT scans are only available at some hospitals, since it is very expensive equipment to buy and maintain. The patient will be referred, if necessary, to one of the hospitals.

The patient needs to lie still for 15-30 minutes on a bed while the bed moves through the machine. Some patients may feel a little bit claustrophobic. A nurse or radiographer is always present. It is not at all painful.

Sometimes a liquid called contrast medium is injected into the blood so that the blood vessels can show up more clearly.

### **Bronchoscopy**

This is done if a diagnosis cannot be made after chest x-ray and sputum collections. The procedure can be done under local anaesthesia or general anaesthesia. A bronchoscope looks like a thin pipe with a camera attached to it. The thin pipe is inserted through the nose and down the airways into the lungs. Then the lungs can be inspected for infection and tumours. "Washing" of the lung can be done whereby a small amount of fluid is injected into the lungs and then sucked out. The fluid is then sent away to the laboratory for investigations. A biopsy can also be done whereby a small amount of tissue is nipped off.

### **Pleural tap and pleural biopsy**

A pleural effusion is a build up of fluid in the space between the lung and the sack around the lung (the pleura). Pleural effusion can occur with TB, pneumonia, cancer and heart failure.

A large pleural effusion will put pressure on the lung and as a result a person will feel breathless.

The fluid can be tapped by inserting a thin needle between the ribs into the sac around the lung and then fluid is withdrawn with a syringe. The fluid is sent away to the laboratory. A lung biopsy can also be done whereby a small piece of the pleura is nipped off with a special needle. Local anaesthetic is injected in the area between the ribs. Pain medication may be given afterwards.

A larger amount of fluid can be tapped to relieve the dyspnoea (shortness of breath).

## **Bone marrow aspiration and biopsy**

Bone marrow is the fluid inside the bone and is responsible for producing red blood cells, white blood cells and platelets. Sometimes the bone marrow may malfunction. Infections and cancers can also sometimes affect the bone marrow.

To diagnose certain kinds of anaemia, cancer of the blood and disseminated TB, a bone marrow aspiration is done. It is often accompanied by a bone marrow biopsy.

The bone marrow is usually taken from a bone in the hip. Local anaesthetic is injected into the area. A needle is inserted through the skin, through the solid part of the bone into the bone marrow. A little bit of bone marrow is sucked through a needle. Thereafter a trephine biopsy is taken.

## **Endoscopy**

A thin pipe with a camera attached to it (gastroscope), is used to examine the inside of the digestive tract. It is used when the doctor suspects a problem in the oesophagus, stomach or small bowel and needs to confirm the diagnosis. The patient will not be allowed to eat or drink anything for 6-8 hours before the procedure. Local anaesthetic is sprayed into the back of the throat to numb it. The thin pipe is then inserted through the mouth, down the oesophagus, through the stomach and into the first part of the small bowel (the duodenum). A biopsy is taken if an abnormality is seen.

## **Colonoscopy**

A thin pipe with a camera attached to it (colonoscope), is used to examine the large bowel (colon). It is done when the cause of diarrhoea is not found on stool samples or if the patient has rectal bleeding.

The colon needs to be prepared with a laxative and plenty of fluids. A sedative is given. The patient lies on the side with the legs drawn up towards the chest. The colonoscope is then passed through the anus up into the colon. It is painless, but uncomfortable.

## **Liver biopsy**

A number of infections and tumours may affect the liver. Some abnormalities may show up on a blood test for liver function. Sometimes a liver biopsy is the only way to diagnose the problem. A blood test will first be done to check if the blood is clotting correctly. Abnormal blood clotting may lead to bleeding.

The patient will lie on his/her back with the right arm above the head. Local anaesthetic is injected into the skin. A special needle is inserted through the ribs into the liver and a biopsy is obtained. The patient will be checked carefully during the next few hours for bleeding.

## **Lumbar puncture**

A lumbar puncture is done when meningitis is suspected. Cerebrospinal fluid forms a thin layer between the brain and spinal cord on the one side and the meninges (sack covering the brain) on the other side. Various conditions affecting the brain can cause changes in the composition of the fluid.

Lumbar puncture is the removal of a small amount of fluid for examination. The patient lies on the side with the head flexed and the legs pulled up as high as possible. The back is pushed out resembling an angry cat. A fine needle is inserted into the space around the spinal fluid and a sample of cerebrospinal fluid is removed for examination by the laboratory. After the lumbar puncture the patient must lie flat for several hours. Headache may develop if the patient gets up too quickly.

## **Pericardial tap**

A sack, the pericardium, surrounds the heart. Between the heart and the pericardium is a small amount of fluid. Certain diseases such as TB and heart failure may cause this amount of fluid to increase. When the doctor diagnoses a pericardial effusion, a small amount of fluid often needs to be removed for investigation.

If the effusion is so big that it influences the functioning of the heart, then more fluid needs to be removed to make some space for the heart.

## **PAP smear and colposcopy**

A speculum is carefully inserted into the vagina so that the doctor or sister can visualize the cervix. A smear is taken with a small wooden spatula. It is not painful, but may be uncomfortable. If any abnormalities are detected that might point to cancer, the patient will be referred for a colposcopy. The colposcopy allows the doctor to get a clear, magnified view of the cervix. During colposcopy, dilute acetic acid and iodine is painted onto the cervix to highlight any abnormalities. It is painless. A small piece of tissue (biopsy) is removed and then sent to the laboratory for investigation. Abnormalities that are precursors of cancer, but not yet cancer, can be treated during colposcopy.

## **3. FUTURE READING**

- Churchill, D and Kitchen V. Patient pictures HIV medicine. Health Press. 1997. Oxford. P10-23.