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Dear Readers,

In this issue we discuss another deadly disease, Cancer. Cancer takes a big toll of life each year all over the world and is on the rise especially in Asia. In Thailand, according to the Ministry of Public Health, cancer/neoplasms are now the third leading cause of death.

Cancer is an extensive subject but we have tried to introduce some of the most common neoplasms and the preventive measures which can be taken as well.

Two other important topics are included. High blood pressure which leads to severe circulatory disorders. Menopause, a major event in a woman’s life which most of the time goes unnoticed.

I hope this issue can provide you with some up to date knowledge on all these topics.

Enjoy your reading!!!

Best regards.

Dr. Seerat Nasir
Editor
Lipoma (tumour of the fat cells)

Fig. 1
Currently the worldwide number of cancer cases is equally distributed between developed and developing countries. However, with increase in life expectancy, it is expected that by the year 2015, two-thirds of all cancer cases will occur in the developing world. This trend can already be seen in the Southeast Asia region. For example in Thailand, in 1982 the rate of cancer/neoplasm deaths was 26.1 (rates per 100,000 population), 43.5 in 1992 and increased to 51.7 in 1999. Neoplasms are the third leading cause of death in Thailand, while diseases of the circulatory system is leading with a rate of 108.4.

**Definition**

The word Cancer refers to the uncontrolled growth of abnormal cells.

Most cells in the body are continually reproducing. Normally one cell divides to produce two new cells through a process known as mitosis. This process helps the body to replace worn cells or to produce

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**Tumours**

Sometimes a group of cells grow together to form a mass inside the body, thus producing a lump or swelling called a tumour. A tumour can grow slowly or rapidly. As it increases in size, it takes space of the nearby healthy cells and shares their nourishment. When a tumour is confined to a limited area and the cells do not spread to other areas, it is called a benign tumour. Benign tumours are not cancers. They generally grow slowly inside a capsule that keeps the cells together in one solid cluster. But benign tumours can be harmful as they put pressure on surrounding parts of the body and can steal the blood supply of the normal tissues. For example, a brain tumour can be very serious. Benign tumours can be removed by surgery and in rare cases they may grow back after removal.

Uncontrolled cell growth can also lead to the development of a malignant tumour or cancerous tumour. Unlike benign tumours, malignant tumours do not grow within a capsule. The tumour quickly branches out and invades and kills nearby healthy tissues. Diseased cells can break away and enter the bloodstream and lymph system. The cells are then carried to other parts of the body where they settle and form new tumours, called metastases.
Fig. 3 Rodent Ulcer. One type of skin cancer.
additional cells for growth and the repair of damage.

Sometimes this process goes out of control. Cells begin to multiply independently and often rapidly, sometimes forming an abnormal swelling or mass known as a tumour or neoplasm.

**Types of cancer**

There are an estimated 200 different kinds of cancers. Each type of cancer has a specific medical name. A tumour is indicated by placing -oma at the end of the name. This name refers to the type of cancer and the part of the body that is affected. For example, lymphoma, the first part of the word tells where the disease occurs. Lymphoma is a form of cancer that affects the lymph system. Another form of cancer is called myeloma. The prefix myelo- refers to the bone marrow. Myeloma is a type of cancer that affects the marrow of the bones.

Leukaemia is a form of the disease that causes the overproduction of white blood cells (leukocytes). Leukaemia is also classified as malignant and the last part – emia shows that the disease affects the blood.

For easy understanding, terms such as lung cancer, breast cancer, bone cancer etc are useful. These are only general terms. There are several forms of bone cancer, just as there are several forms of breast cancer and lung cancer.

**Early detection of cancer**

Cases history of cancer survivors indicate that early detection often saves lives.

For example when breast cancer is diagnosed in the earlier stage – when there is just a small localized tumour – the survival rate approaches 100 per cent.

Cure rates of easily detectable cancer are much higher than the rates of those difficult to detect. The cure rates of most of the skin cancers which are easy to detect, are 95%, while the cure rate of the lung cancer, difficult to detect early, is only 13%.
Fig. 5 Oral candidiasis is a common complication of acute leukemia.
Distribution of cancer

Cancer rates vary from population to population, those that are common in western countries may not be common in Asian countries. Cancer rates may vary according to age, gender, and other factors.

Some forms of cancer are obviously gender related. Cancers of the ovaries, uterus, and cervix are only found in women, whereas cancer of the testis and prostate are for men only. Women are susceptible to more forms of breast cancer and it is more common among women than men. Lung cancer is now the leading cause of death from cancer for both men and women.

The next section is short description of various cancers.

Cancer of the mouth and throat (oral cancer)

Oral cancer is one of the ten leading causes of death in the world and its prevalence has been found higher in the Indian subcontinent (e.g. India, Pakistan, Bangladesh, Sri Lanka, Thailand and Indonesia), than other parts of the world. This cancer may appear on the lips, gums, tongue and throughout the back, roof and floor of the mouth. Cancer cells growing at these sites may spread to the neck’s lymph nodes.
Fig. 8 Betel nut stained teeth

Courtesy Andrea Menefee, IRC
nodes and the jaw bones if left undetected. Oral cancer is one of the easiest cancers to detect. Between 90 and 95 percent of all oral cancers arise from the cells that line the mouth.

**Causes, incidence, and risk factors**

**Tobacco/Alcohol use:** Tobacco and excessive alcohol use increase the risk of oral cancer. Approximately 75% of oral cancer cases are caused by smoking. Chewing tobacco is also a risk factor. People using both tobacco and alcohol are at greater risk than those who use either substance alone.

**Chewing betel leaves & areca nuts:**
Betel, which is chewed with areca nut, tobacco, lime and other special betel spices can cause oral cancer. In the Indian subcontinent betel leaf chewing is part of the culture and is found to be the main cause of oral cancer.

**Sunlight:** Exposure to sunlight is a risk for lip cancer.

**Age:** Oral cancer is typically found in older people as they are exposed longer to risk factors. Incidence of oral cancer rises steadily with age, reaching a peak in persons aged 64-74.

**Gender:** Oral cancer strikes men twice as often as it does women.

**Race:** Oral cancer occurs more frequently in African Americans than in whites.

**Possible signs/symptoms of oral cancer**

- A lump or thickening in the mouth
- Soreness or feeling that something is caught in the throat

**What a Health Worker Can Do about Oral Cancer?**

A thorough head and neck examination should be a routine part of each patient’s dental visit. Otherwise, a patient with any of the above complaints should be checked as well. Special attention should be given to those who use tobacco or excessive amount of alcohol.

- **EXAMINE** the the head & neck patients at each visit.
- **TAKE A HISTORY** of their alcohol and tobacco use.
- **INFORM** the patients of the association between tobacco use, alcohol use, and oral cancer.
- **FOLLOW-UP** to make sure a confirmed diagnosis is obtained on possible signs/symptoms of oral cancer.

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**Warning Signs**

Two lesions that could give rise to cancer are:
1. Leukoplakia (white lesions)
2. Erythroplakia (red lesions)

Erythroplakias are less common than leukoplakias, but are more likely to become cancerous. It is important to check any white or red lesion that does not resolve in two weeks by doing biopsy to confirm the diagnosis.
Fig. 10  Solar keratosis. Long exposure to sunlight can cause these lesions which are mostly malignant.

Fig. 11  Clubbing of the nails in a patient with lung cancer
• Difficulty in chewing or swallowing
• Ear pain
• Difficulty in moving the jaw or tongue
• Hoarseness of voice
• Numbness of the tongue or other areas of the mouth
• Swelling of the jaw that causes dentures to fit poorly or become uncomfortable

If the above problems persist for more than two weeks, a thorough clinical examination and necessary laboratory tests should be performed to confirm the diagnosis. If diagnosis is not possible refer to a hospital.

**Lung Cancer (bronchogenic cancer, cancer of the lung)**

This cancer is a malignant tumour that arises from the lung tissue.

**Causes, incidence, and risk factors**

Most lung cancers (83%) are associated with, and probably caused by, cigarette smoking. The risk of lung cancer increases with increased number of cigarettes smoked everyday and earlier the age at which smoking started. Indirect smoking (being present while others smoke) is also considered to be a risk. High levels of pollution, radiation, and exposure to some chemicals like asbestos may also increase the risk. Cooks and chemists also have an increased risk since they breathe in smoke and other chemicals often.

Lung cancer begins by cellular changes in the bronchial epithelial cells (lining of the airways) and can invade the nearby tissues before symptoms are noticed.

**Symptoms**

• Cough
• Bloody sputum
• Shortness of breath
• Chest pain
• Loss of appetite
• Weight loss
Fig. 14 Comparison of normal and cancerous cells in the large respiratory airway. Normal cells (top) show numerous hairlike processes (cilia).

\( \text{Fig. 13} \) Courtesy Andrea Menefee, IRC
Additional symptoms may be present as:

- Weakness
- Swallowing difficulty
- Difficulty of speech
- Skin turning blue
- Palor
- Swelling of the face
- Joint swelling
- Clubbing of fingers.

**Signs**

On listening with a stethoscope (auscultation), localized wheezing or signs of localized pneumonia is present.

Examination of the hands may show clubbing of the fingers (soft tissue enlargement of the tips of the fingers).

**Treatment**

The treatment depends upon the type of cancer and the stage of the disease. Surgical resection (cutting of the tumour) is usually indicated for disease that has not spread beyond the lung. Chemotherapy and radiation therapy are other forms of treatment.

**Expectations (Prognosis)**

The survival for more than 5 years is less than 10%. When surgery is possible for disease that has not spread beyond the lung, 5 years survival rates can be as high as 35 to 40%.

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**Breast Cancer (or carcinoma of the breast)**

It is a malignant form of cancer that develops in breast tissue.

**Causes, incidence, and risk factors**

Causes of most types of breast cancer are unknown. Breast cancer may occur in men as well as women, but is much more common in women. Some reports show that one in 8 or 9 American women will develop breast cancer at some point in life.

The risk increases greatly after age 30. The average age of women diagnosed with breast cancer is 60 years. In general, the rate of breast cancer is lower in developing countries than developed countries. According to the site of the cancer, the rate varies. It is more common in the upper outer quadrant in women (see Fig-15).

**The risk factors include:**

- having a family history of breast cancer, particularly in mother or sisters or brothers
- previous medical history of breast cancer

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**Breast Cancer**

It is a malignant form of cancer that develops in breast tissue.
Fig. 17 Carcinoma of the right breast (upper outer quadrant)
• ovarian cancer
• uterine cancer
• colon cancer
• early menarche (start of menstruation before age 12)
• late menopause (after age 55)
• no pregnancies or a first pregnancy after age 30
• radiation exposure
• diet: high fat diet and overweight may be a risk factor

Symptoms

• Breast lump or breast mass noted upon breast self exam (Health Messenger, Issue 1, page 9). The lump is usually painless, firm or hard, with irregular borders.
• Lump or mass in the armpit
• A change in the size or shape of the breast
• Abnormal nipple discharge
• Usually bloody or clear-to-yellow fluid
• May look like pus (purulent)
• Change in the colour or feel of the skin of the breast, nipple, or areola
• dimpled, puckered, or scaly
• retraction, “orange peel” (peau d’orange) appearance
• redness
• accentuated veins on breast surface
• eventually (at later stage of the disease) skin ulceration
• Change in appearance or sensation of the nipple
• pulled in (retraction), enlargement or itching
• Breast discomfort on one side only
• Breast enlargement on one side only
• Bone pain
• Weight loss
• Swelling of arm
• Breast pain
• Breast development in males

Stages of breast cancer (From the American Joint Committee on Cancer)
1. tumour less than 2 cm in diameter, nodes not involved, no distant metastasis
2. tumour less than 5 cm in diameter, nodes not fixed, no distant metastasis
3. tumour greater than 5 cm in diameter, invading the skin, or attached to the chest wall, or supraclavicular nodes noted, with no distant metastasis
4. tumour with distant metastasis

Treatment

Treatment is chosen according to the extent and stage of the disease. These days breast cancer is considered a systemic disease and requires both local and systemic treatment.

• Local treatment may include lumpectomy (removal of the lump), mastectomy (partial, total, or radical with axillary dissection) and radiation therapy – all directed at the breast and immediate surrounding tissue.
• Systemic treatment includes chemotherapy and hormonal therapy, which circulate drugs and hormones throughout the body.

Fig.18 Advanced carcinoma of the male breast
entire body in an attempt to eliminate cancer cells that may be present in distant parts of the body.

**Expectations (Prognosis)**

The clinical stage of breast cancer is the best indicator for prognosis (probable outcome). Five-year survival rates for individuals with breast cancer who receive appropriate treatment are approximately:

- 85% for stage 1
- 66% for stage 2
- 41% for stage 3
- 10% for stage 4

It is important for every woman, over 35 years old, to do the self-examination of the breast every month. The health workers should therefore make it a part of their counseling as it is very important for improving women’s health.

**Cervical cancer (cancer of the uterine cervix; cervical neoplasm)**

**Causes, incidence, and risk factors**

Cervical cancer is the third most common type of cancer in women. Almost 2-3% of all women over age 40 years will develop some form of cervical cancer. The average age at diagnosis is 45 years, but it has been found in women between 20-30 years of age.

Like other cancer the exact cause is unknown. The risk factors include multiple sexual partners, early onset of sexual activity (less than 18 years), or early childbearing (less than 16 years). Sexually transmitted diseases, specifically HPV (Human papilloma virus – genital warts), HIV infection, and genital herpes also appear to increase the risk of cervical cancer. The development of cervical cancer is gradual and may take many years.

**Symptoms**

- Abnormal vaginal bleeding
  - Between menstrual periods
  - After intercourse
  - After douching
  - After menopause
- Persistent vaginal discharge – pale, watery, pink, brown or blood streaked, may be dark and foul-smelling.

Advanced disease symptoms include:
- Anorexia (loss of appetite)
- Weight loss
- Fatigue
- Back pain or leg pain
- Involuntary loss of urine or rectal contents from the vagina through an abnormal tube-like passage (fistula) that connects the vagina with the bladder or rectum.

**Signs**

A physical examination may show the cervix to be irregular, enlarged, firm, or friable (bleeds to touch) in the later stages of cervical cancer. However, the cervix always looks normal in the early stages of the disease.

**Treatment**

Options for treatment may vary depending on the extent of disease, the type of cancer, the age and general health of the woman, and the desire to have children in the future. Surgery may range from very localized to radical hysterectomy (removal of the uterus and cervix).
Glossary

Mitosis: the process of cell division that results in two identical daughter cells.


Lumpectomy: surgical removal (excision) of the lump.

Mastectomy: surgical removal of part (partial) or whole (total) of the breast. Radical with axillary dissection - removal of the breast, muscles, lymph nodes of the axilla, including the skin and tissues just below the skin.

Axilla: armpit.

Systemic: affecting the body as a whole.

Metastasis: the spread of disease from one organ to another which is not directly connected to it. This may be the spread of germs (tuberculous bacillit) or cells as in malignant tumours.

Distant metastasis: the growth of germ or abnormal cells distant from the site primarily affected.

Leukaemia: a progressive, malignant disease of blood forming organs characterized by rapid growth and development of leukocytes (white blood cells) and their premature forms in the blood and bone marrow.

Clubbing: a rapid growth in the soft tissues about the terminal portion of the fingers or toes.

Lesion: the discontinuity of a tissue or loss of function of a part of this tissue due to some infection or injury.

Chemotherapy: treatment of disease by chemical agents; that is, use of chemicals that may kill the germ but do not harm the patient.

There is no certain reason for getting cancer, but it has been found that some risk factors are responsible for it. This article will briefly discuss the risk factors and the ways to prevent cancer.

Cancer is the second most common cause of death in the United States and 5% of deaths were attributed to cancer in the Karenni camps last year. Cancer is not like malaria or pneumonia - it is not caused by a germ that spreads from one person to another. There are many, many things that can contribute to developing cancer.

It is not always easy to know exactly why a person gets cancer, because cancer can be caused by many different things. But, there are some things, called ‘risk factors,’ that increase a person’s chance of getting cancer.

In order for cancer to develop in a person’s body, the cells in the body must change from normal cells to cancer cells. There are some ‘risk factors’ that can cause changes in normal cells, and regular exposure to these risk factors increases a person’s chances of developing cancer.

For cancer to develop in a person, that person must be exposed to a risk factor for a long time, usually many years. For example, it is known that smoking tobacco causes lung cancer. But, smoking one ‘cheroot’ or cigarette will not cause cancer cells to develop. A person must smoke regularly and for a long time to cause cancer.

DEFINITION
Risk Factors = something that increases a person’s chance of getting cancer or another disease. For example, smoking cigarettes is a ‘risk factor’ for getting lung cancer - a person who smokes is much more likely to get lung cancer than a person who does not smoke. Not everyone who smokes will get lung cancer, but if a person smokes, they are MUCH MORE LIKELY to get lung cancer than a person who does not smoke.

Preventing Cancer
Andrea Menefee, IRC Mae Hong Son

Some of these risk factors for cancer are: gender, heredity, age, diet, smoking or drinking alcohol, and chewing betel nut.

Risk Factors for Developing Cancer

Heredity
Some people inherit - from their parents and grandparents - a risk of getting a certain type of cancer. For example, if a woman gets breast cancer, it means that her daughter is probably more likely to get breast cancer. (Remember, heredity is a risk factor - this means that the daughter is more likely to get breast cancer because her mother had it, but this does not mean that she will definitely get breast cancer).
**Age**

A person who is older is more likely to develop certain kinds of cancers, and women may be more likely than men to develop certain types of cancers. For example, older people may be more likely to develop colon cancer than a younger person.

- *low fiber* - people who do not eat enough fiber are more likely to get colon or other cancers (fiber is the part of food that your body cannot digest and use, but helps to keep your digestive system functioning well.)
- *pickled or smoked foods* - people who live in countries that eat a lot of pickled foods get more cancer of the stomach.

**Smoking and Drinking Alcohol**

Tobacco is the number-one cause of lung cancer in the world. Using tobacco for a long time will increase a person’s risk for lung cancer, and also for throat and mouth cancers. Chewing tobacco can cause bladder, pancreas, kidney cancer, and alcohol can increase your chance of getting mouth, throat, or liver cancers.

**Chewing Betel Nut**

Chewing betel nut can increase the chance of getting cancer of the mouth or throat.

Some risk factors are things that people can control or change to help prevent cancer, and some are not. For example, a person cannot change their gender or their age to prevent cancer, but they can change their habits and stop smoking to prevent cancer.

There are things that people CAN do to help prevent developing cancer, which include changing to health behaviors and

<table>
<thead>
<tr>
<th>Factors you can't change to prevent cancer</th>
<th>Factors you can change to prevent cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender, Heredity, Age</td>
<td>Diet, Smoking, Drinking Alcohol, Chewing Betel Nut</td>
</tr>
</tbody>
</table>
lifestyles. Health workers, including health educators, medics, MCH workers, etc., can give these simple messages about cancer prevention to the community (see below).

All people should try to have healthy habits to prevent cancer. But, if a person does develop cancer, early detection is important in treatment and recovery from cancer. There are some ‘cancer signals’ that everyone should be aware of. If a person has any of these ‘signals,’ they should go to the clinic for an exam.

**PREVENT CANCER BY**

**DIET - Eat Healthy Foods**

Some foods help prevent certain types of cancer. People should eat plenty of:

- fruits and vegetables, (especially those high in vitamin C and vitamin A, like green leafy vegetables, citrus and guava fruits, pumpkin and other squashes, mango and papaya, etc.)
- beans and rice (especially mountain rice)

But avoid eating too much:

- animal fats
- burned foods
- pickled foods

And, store beans and peanuts in dry place to prevent mold.

**SMOKING - Stop Smoking**

Stopping smoking is the best way to prevent lung cancer.

**ALCOHOL - Do Not Drink Too Much Alcohol**

Do not drink alcohol or drink only occasionally and not until drunk to prevent throat and liver cancers (and liver disease).

**BETEL NUT - Avoid Chewing Betel Nut**

Do not chew betel nut or chew only occasionally to prevent mouth and throat cancer.

**SEVEN WARNING SIGNALS FOR CANCER**

Having one or more of these signs does NOT MEAN that you have cancer, but means that you should be checked at the clinic.

- Change in bowel or bladder habits
- A sore that does not heal with proper care
- Unusual bleeding or discharge from vagina or penis
- Thickening or lump in breast or other part of the body
- Indigestion or difficulty in swallowing
- Obvious change in wart or mole
- Cough or hoarseness that won’t go away
Blood pressure is the force exerted by the blood on the walls of the arteries (see Health Messenger Issue no 6 p.11). High Blood Pressure (HBP) or Hypertension means a blood pressure (BP) of 140/90 or more.

HBP is often called the silent killer because it does not often produce noticeable symptoms. In some parts of the world, it affects up to 20% of the adult population.

Chronic Hypertension is thought to be the root cause of many of the problems that affect the heart and blood vessels. It makes the heart to perform a greater than normal amount of work. This extra work leads heart muscle to become very big, and can result in heart failure. With hypertension, atherosclerosis (deposits of fats in the arteries which become narrower) develops faster and in turn increases the risk of blood clots. Thromboemboli (obstruction of a blood vessel with clotted blood) may form and increase the probability of blood vessel rupture.

Hypertension occurring as a result of a known disease is called secondary hypertension. The main causes are kidney diseases and atherosclerosis because they tend to raise blood volume. But it accounts for only about 10% of the cases.

The majority of people with hypertension have primary or essential hypertension which is the result of complicated and not well understood processes. However we know that there are a number of things which make it more likely for people to get hypertension:

- Pain
- Stress
- Lack of exercise
- Certain medicines (Prednisolone, Aspirin, and Indomethacin can cause HBP if used for a long period of time. If adrenaline is administered, it can cause HBP immediately after being used).
- Excess of alcohol
- Smoking
- Over-weight
- Excess of salt in the diet

**Mild Hypertension**: BP above 140/90 but below 160/100
**Moderate Hypertension**: BP above 160/100 but below 180/110
**Severe Hypertension**: BP above 180/110 with one or more of the following signs:
  - Severe headache, blurring of vision, epistaxis (bleeding from nose), oedema, dyspnoea, paresis/paralysis
Consequences of High Blood Pressure

If not treated properly High Blood Pressure can cause damage to some vital organs like heart, lungs, kidneys, brain.

Cardiac Failure

It is a clinical syndrome characterized by distinctive symptoms and signs resulting from disturbances in cardiac output or from increased venous pressure.

<table>
<thead>
<tr>
<th>Organ</th>
<th>Effect of Hypertension</th>
<th>Complications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart</td>
<td>• Normally the heart works as a pump, increasing its size and then decreasing to push the blood in the vessels. When the heart looses its capacity to stretch, it is unable to pump enough blood in the body.</td>
<td>Cardiac Failure (or Heart Failure)</td>
</tr>
<tr>
<td></td>
<td>• Due to increased size the heart itself does not get much blood supply.</td>
<td>Angina Pectoris</td>
</tr>
<tr>
<td>Lungs</td>
<td>• Because the heart is not able to pump enough blood, the lungs are flooded with excess blood.</td>
<td>Cardiac Failure</td>
</tr>
<tr>
<td>Kidneys</td>
<td>• The high pressure in the small vessels of the kidneys hampers the perfusion of toxins and other substances. It causes chronic disease of the kidneys. It gives rise to proteinuria.</td>
<td>Chronic renal failure</td>
</tr>
<tr>
<td>Brain</td>
<td>• When a vessel of the brain is blocked or ruptured, the nerve cells don’t get blood supply and they may die.</td>
<td>Stroke</td>
</tr>
</tbody>
</table>

Signs and Symptoms

1. Difficulty in breathing when the patient works, does a little exercise or while laying down.
2. Oedema of legs (generally both).
3. Enlargement of the liver.
4. Ascitis.
5. Palpitations.
7. Congested veins in the neck.

Angina Pectoris

This may be due to ischemic heart disease, in which a portion of the heart gets too little blood and oxygen. Angina is a chest pain, which appears when the patient is under mental or physical stress. The pain radiates to the left arm and disappears after taking rest. While angina can be a warning sign that a person is at risk for a heart attack, it does not always lead to a heart attack.
Cerebral Thrombosis
(Cerebral Embolism)
(Cerebral Haemorrhage)
Stroke

A stroke is a sudden loss of brain function resulting from lack of blood supply to part of the brain. There are three types of stroke: cerebral thrombosis, cerebral embolism, and cerebral haemorrhage. A \textit{cerebral thrombosis} is caused by a blood clot forming in a blood vessel of the brain (cerebral blood vessel). A \textit{cerebral embolism} occurs when material from other parts of the body obstructs a blood vessel in the brain. In a \textit{cerebral haemorrhage}, blood flow to the brain is impaired by the rupture of a cerebral blood vessel. In all three cases, the supply of oxygen to parts of the brain is less, resulting in the death of some brain tissue.

\textbf{Signs and Symptoms}

1. Mental status
   - Altered level of consciousness.
   - Disorientation: not able to situate her/his self on time, space, identity.
   - Problems with memory.
   - Disturbance of speech.

2. Problems in motor system
   - Paralysis (inability to perform voluntary movements)
   - Problems in coordination

3. Troubles in sensations
   - The patient does not feel anything when she/he touches something
   - No sensation if touched at various parts of the body

\textbf{Management of Hypertension}

Supportive treatment for Hypertension: It should be provided according the causes of the disease.

1. Pain: Try to eliminate the cause of pain if present. Pain killers like Aspirin and Indomethacin can increase BP. Paracetamol can be used instead.
2. Anxiety: Try to make the patient calm down, if anxious.
3. Medicine: Take history of taking medicines. Check if the patient is taking any medicine that increase blood pressure and can be stopped.
4. Alcohol and smoking: Ask the patient to stop drinking alcohol and smoking.
5. Reduce salt intake, that is, use less salt when cooking or on cooked food.
6. Regular monitoring of vital signs (pulse, BP, respiration etc).

\textit{Specific management for various types of hypertension are to be followed according to the Burmese Border Medical Guidelines.}

\textbf{Treatment of hypertension is very long, continued for the rest of the life. Before starting any drug treatment, make sure that the patient understood the importance of continuing treatment and follow up and come to the clinic for regular check-ups.}
Fig. 25 A lung of a smoker compared to one of a non-smoker

Fig. 26 Checking Blood Pressure
**Glossary**

**Murmurs:** it is a hissing or blowing sound due to blood flow crossing the heart valves.

**Oedema:** accumulation of fluid in the body.

**Ascitis:** fluid inside the abdomen.

**Dyspnoea:** difficulty in breathing.

**Paresis/paralysis:** inability to move some part of the body.

**Mental status:** state of consciousness.

**Disorientation:** unable to know who you are, where you are, which date it is, etc.

**Coordination:** the correct functioning together of interrelated organs and parts. For example, moving a hand to hold a glass, or walking towards the door etc.
What is menopause?

It is the period in women’s life when the ovaries cease producing eggs, menstruation stops permanently, signifying the end of women’s ability to have children, and the body decreases its production of female hormones - oestrogen and progesterone.

Causes, incidence, and risk factors

Known as the “change of life”, menopause is a natural event in a woman’s life which normally occurs between the ages of 40 and 55. Menopause is the last stage of a gradual biological process ending reproductive ability, and menstruation becomes less frequent and eventually stops. In some women, menstrual activity stops suddenly, but both the amount and duration of flow diminish slowly, and frequently the periods become more closely or more widely spaced.

The transition from regular ovarian function to its absence is often called the perimenopause or climacteric. It can occur rapidly or slowly. The time involved can range from one month to more than 5 years. Menopause is considered complete when a woman has been without period for 1 year.

The symptoms of menopause are caused by changes in oestrogen levels. As the ovaries function less than before, they produce less oestrogen and then the body reacts. Some women may experience few or no symptoms, while others experience various symptoms ranging from mild to fairly severe ones. This variation is normal. A gradual decrease of oestrogen allows the body to slowly adjust to the hormone change, but in some women a sudden decrease in oestrogen level occurs, causing severe symptoms. This result is often seen when menopause is caused by surgical removal of the ovaries (surgical menopause).

A reduction in estrogen can cause both acute and chronic side effects, affecting mostly the hormone-dependent tissues such as brain, bones, heart, blood vessels, and skin. After menopause, women are at

Surgical menopause: Premenopausal women who have both their ovaries removed surgically. They experience an abrupt menopause and may be affected more by menopausal symptoms than are those who experience it naturally.
<table>
<thead>
<tr>
<th>မှန်သော အချက်အလက်</th>
<th>အဓိကအခက်အလက်</th>
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<td>အချက်အလက်များတစ်ခုခုကိုလေး ရော်စင်ပြောင်းလဲစေ မှု ရသည်</td>
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increased risk for osteoporosis (loss of calcium from the bones, causing bone fragility), heart disease, urinary incontinence, acute burning or itching of the vulva or vagina, and painful sexual intercourse.

Hot flushes, caused by an increase of blood flow in the blood vessels of the face, neck chest and back, and vaginal dryness, caused by thinning of the tissues of the vaginal wall, are the two side effects most frequently complained about. The mood changes and lack of sex drive that are also sometimes associated with menopause may result partially from the hormone decrease.

Cardiovascular diseases (CVDs) are disorders of the heart and circulatory system. They include thickening of the arteries (atherosclerosis) that serve the heart and limbs, high blood pressure, angina, and stroke. For unknown reason, estrogen helps protect women against CVD during their childbearing years. After menopause, the incidence of CVD increases, the risk being greater in each passing year.

For middle-aged women the threat of osteoporosis is one of the most important health issues. It is a condition in which bones become thin, fragile, and may easily fracture. Gradually and without causing any discomfort, bone loss leads to a weakened skeleton, which is not able to support normal daily activities. Some other physiological conditions can quicken bone loss, such as pregnancy, breast feeding, and immobility. Oestrogen deficiency plays the vital role in the process

<table>
<thead>
<tr>
<th>Target Organ</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bladder and urethra</td>
<td>Urethritis, frequency or urgency, stress incontinence, development of cystourethocele</td>
</tr>
<tr>
<td>Breasts</td>
<td>Decrease in size and are less firm, loss of elasticity with drooping</td>
</tr>
<tr>
<td>Brain</td>
<td>Psychologic changes, forgetfulness, inability to concentrate, behavioral changes (60% of women), development of depression</td>
</tr>
<tr>
<td>Cardiovascular system</td>
<td>Increase of atherosclerosis, increased incidence of coronary heart disease</td>
</tr>
<tr>
<td>Neuroendocrine</td>
<td>Hot flushes (75% of women), psychologic changes</td>
</tr>
<tr>
<td>Skeleton</td>
<td>All osteoporosis related problems: loss of height, backache, fractures</td>
</tr>
<tr>
<td>Skin and mucous membrane</td>
<td>Dryness, decreases elasticity and loss of elastic tissue, atrophy, minor hirsutism of face (increased hair)</td>
</tr>
<tr>
<td>Uterus and pelvic structures</td>
<td>Loss of elasticity and onset of prolapse, development of cystocoele/rectocoele/urethrocoele (see Fig-27)</td>
</tr>
<tr>
<td>Vagina</td>
<td>Increase in pH, atrophic vaginitis, dyspareunia (75% women)</td>
</tr>
<tr>
<td>Vulva</td>
<td>Pruritus vulvae</td>
</tr>
</tbody>
</table>
of bone loss. During perimenopause, the transitional phase, bone loss quickens, as the oestrogen level drops significantly.

With advancing age, the walls of the vagina become thinner, dryer, less elastic and more vulnerable to infection. These changes can make sexual intercourse uncomfortable or painful (dyspareunia). Most women find it helpful to lubricate the vagina. Watersoluble lubricants are preferable, as they help reduce the chance of infection. Petroleum jelly should be avoided as it cause allergic reaction in some women and also can damage condoms.

Involuntary loss of urine (incontinence) may occur in ageing women due to the changes in tissues of the urinary tract, more common in certain chronic illnesses or urinary infections. Exercise, coughing, laughing, lifting heavy objects or similar movements that put pressure on the bladder may cause small amounts of urine to leak. Lack of regular physical exercise may contribute to this condition. Incontinence is not a normal part of ageing, rather usually a treatable condition that needs medical attention. Recent research has shown that bladder training is a simple and effective treatment for most cases of incontinence and is less expensive and safer than medication or surgery.

![Diagram of female reproductive system](image)

(A) Cystocele

(B) Rectocele

(C) Urthrocele
Management

Natural menopause usually requires no treatment. Regular exercise and nutritious food intake is a good way to prevent some of the symptoms such as hot flushes.

Menopause might give a woman the feeling of “uselessness”, as she cannot have children any more. At this time, it is important that women keep learning and keep themselves active, because they can still contribute a lot to their communities. It’s not your age that counts, it is how you handle it.

Fig.28 Increased hair in the face (hirsutism) of a menopausal woman

Glossary:

**Oestrogen:** one of the female sex hormones produced by the ovaries.

**Progesterone:** one of the female sex hormones produced by the ovaries.

**Stress incontinence:** loss of bladder control and passage of urine due to pressure.

**Cystourethrocoele:** prolapse of the female bladder and urethra.

**Hirsutism:** abnormal hairiness, especially an adult male pattern of hair distribution in women.

**Cystocele:** hernial protrusion of the urinary bladder through the vaginal wall.

**Rectocele:** hernial protrusion of part of the rectum into the vagina.

**Urethrocoele:** prolapse of the female urethra thorough the external urethral opening.

**Utrophic vaginitis:** infection of the vagina occurring in postmenopausal women and associated with oestrogen deficiency.

**Dyspareunia:** painful coitus or sexual intercourse.

**Pruritus vulvae:** itching of the vulva.
When I first saw the little girl, her lovely smile immediately attracted me. I was a stranger to her, but she didn’t show any shyness and was trying to understand us. She was at the AMI patient house waiting for her return to her village. Her left leg was amputated below the knee. From that very moment I wanted to write something on this brave little girl. Dear readers, today I would like to introduce you to Mu Ler Say alias Moe Moe Aye, a little girl from a Thai-Karen village.

Moe Moe lost her father when she was only one and a half years old. Her mother remarried but her new husband didn’t want to take responsibility of Moe Moe. So her mother asked her brother Hla Ag Tun to take care of her little girl. Now 4 year old, Moe Moe is with her uncle since then and loves him more than anything in this world.

I met Moe Moe again on 3rd June at AMI office, Mae Sot. She was waiting to go to Chiangmai for her treatment. I talked with her uncle about her illness. Two medics from Nu Poh camp, Eh Wah and Hsar Lah, helped me in the interview.

When Moe Moe was almost one and a half year old she fell and hurt her calf. There was swelling and it was painful. The condition lasted for 2 months during which she didn’t take any medicine. Later, when she was 2 years old the swelling and pain returned at the same area. This time, there was an open wound – more like an abscess with inflammation and bad smell. This time the mother treated her with some medicine. The inflammation was gone but there was a mass present. The condition remained like that for 2 or 3 months and then the infection signs appeared again.

This time Moe Moe was taken to the hospital and the wound was dressed and she was given some antibiotics. Even with this treatment there was no improvement and the wound became worse day by day. Then she was referred to Mae Sot hospital. There an
X-ray was taken which showed bone fracture. They sent her to Chiang Mai hospital and the reports were sent to Bangkok.

After 2 weeks she got the result of the biopsy. She had malignant bone cancer. The doctor of Chiang Mai hospital explained the disease to her uncle and her leg was amputated.

She is still taking her treatment and trying to adapt to her new life with a pair of crutches. But she looked so undisturbed and smiling all the time that I felt great respect for this little girl who was fighting cancer with great courage.

QUESTIONS AND ANSWERS ABOUT BONE CANCER

1. Are all bone tumours cancerous?

No. Bone tumours may be benign or malignant. Benign bone tumours are more common than malignant ones. Both types may grow and compress healthy bone tissue and absorb or replace it with abnormal bone tissue. Benign bone tumours do not spread and are rarely life-threatening.

2. What types of cancer arise in the bones?

The most common type of bone cancer is osteosarcoma, which develops in new tissue in growing bones. Others include chondrosarcoma, Ewing’s sarcoma.

3. What are possible risk factors for bone cancer?

Like other cancers, there is no certain cause of bone cancer, but a number of factors may act as risk factors. These cancers occur more frequently in children and young adults, particularly those who have had radiation or chemotherapy treatments for other conditions. A small number of bone cancers are due to heredity.

Cancer of the Bone

<table>
<thead>
<tr>
<th>Types of Cancer</th>
<th>Tissue of Origin</th>
<th>Common Locations</th>
<th>Common Ages (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osteosarcoma</td>
<td>Osteoid</td>
<td>Knees, upper legs, upper arms</td>
<td>10-25</td>
</tr>
<tr>
<td>Chondrosarcoma</td>
<td>Cartilage</td>
<td>Pelvis, upper legs, shoulders</td>
<td>50-60</td>
</tr>
<tr>
<td>Ewing’s sarcoma</td>
<td>Immature nerve tissue usually in bone marrow</td>
<td>Pelvis, upper legs, ribs, arms</td>
<td>10-20</td>
</tr>
</tbody>
</table>

Fig.32 Osteosarcoma of the upper arm in a 15 year old boy
Fig. 33: Chondrosarcoma of the hip bone.
4. **What are the symptoms of bone cancer?**

Pain is the most common symptom of bone cancer. Symptoms may vary depending on the location and size of the cancer. Tumours occurring near joints may cause swelling or tenderness in the affected area. Bone cancer can also interfere with normal movements and can weaken the bones, leading to fracture occasionally. Other symptoms may include fatigue, fever, weight loss, and anaemia. But none of these symptoms means that the patient certainly has cancer.

5. **How bone cancer is diagnosed?**

Patient’s personal and family history should be taken and a complete medical exam should be done. A blood test to determine the level of an enzyme called alkaline phosphatase may be suggested. X-rays can show the location, size, and shape of a bone tumour or presence of any fracture due to the tumour. However, a biopsy – the removal of a sample of tissue from the bone tumour – is needed to reach the final diagnosis and to determine whether cancer is present.

6. **What are the treatment options for bone cancer?**

Treatment options depend on the type, size, location, and stage of the cancer, as well as the person’s age and general health. Surgery is often the primary treatment. Although amputation of a limb is sometimes necessary, pre- or post-operative chemotherapy has made limb-sparing surgery possible in many cases. Chemotherapy and radiation may also be used alone or in combination.

---

**Glossary**

- **Osteosarcoma**: osteogenic sarcoma or cancer of the tissues of growing bone.
- **Osteoid**: young bones which has not undergone calcification.
- **Chondrosarcoma**: a malignant tumour derived from cartilage cells.
- **Ewing’s sarcoma**: a malignant tumour of the bone which always in medullary tissue occurring more often in cylindrical bones, with pain, fever, and leukocytosis (increased number of white blood cells) as prominent symptoms.
This is a short description of the activities undertaken in Nu Poh camp to raise awareness on STDs and HIV/AIDS and to promote condom use as a preventive measure.

The Community Health Education (CHE) program started promoting condom use targeting the married couples through a combined program of Family Planning and HIV/AIDS prevention.

Condom Promotion Plan

A Condom Promotion Plan was designed with the purpose of:
1. changing the attitude of the refugees towards condom use by establishing the idea that condom is a medical tool to prevent disease; and
2. making refugees familiar with condom by increasing the availability of & accessibility to condoms and discussing more about condoms to overcome the barrier of shyness.

Activities undertaken

1. Training of Community Health Educators (CHEs).
   (a) Providing training to increase knowledge on side effects of family planning methods and how to choose the best method to meet the needs of the refugees. The relation between STD and HIV/AIDS transmission was also discussed.
   (b) Two case studies of STD transmission were discussed which were about one young woman who got STD from her new boyfriend and one man who visited a sex worker and passed the disease to his wife.
   (c) Session on proper use of condom was conducted.

   The CHE’s, during their home visits, were expected to teach the community to increase the understanding of family planning methods and their side effects, as well as using condom to protect against STDs and HIV infection. New couples and persons who were afraid of the side effects of pill and injection, were the target groups for teaching condom use.

2. Condom distribution.
   In order to have condoms available and accessible to all refugees who needed them, the CHE program distributed condoms to married couples during their home visits. CHE staff also kept condoms in their houses, so that whenever someone needed condoms she/he could easily get it. Moreover, to increase the demand of condom use, CHE distributed the most popular kind of condom in the camp. Stickers on condom use and ways of HIV/AIDS transmission were distributed along with condoms.
Fig. 36. Condom demonstration in the community.

Courtesy Nipaporn Intong, ARC
3. Group discussion.

The CHE staff listened to all the complaints about using condoms from the users during home visits. From the information gathered, a group discussion on condom use was arranged. The program invited a guest to share with the group about his experiences in using condom. The guest talked on how to increase pleasure in using condom, and demonstrated how to use it properly. He also discussed personal problems in using condoms, and the benefits of condom use.

After applying all the above efforts, there was some evidence that changes occurred.

1. Community change for condom promotion.

After the consistent and systematic plans of HIV/AIDS prevention and condom promotion, we got positive responses from the refugees and the community. The Women’s group was the first to accept condoms as their choice of family planning method, and a way to protect themselves from getting STDs/HIV/AIDS. Some women said they communicated more with their husbands about condom use for birth control and STD/HIV/AIDS prevention. They actively participated in any HIV/AIDS training and community health education program.

The next groups were health workers (ARC and AMI refugee staff) and Camp Health Affair Committee. These two groups were major supporters of condom promotion and HIV/AIDS prevention activities. The camp committee, then supported our condom promotion activities. An increased number of condoms were distributed in the community.

There are plans to provide more condoms in public places such as, AMI hospital and herbal medicine hospital in Nu Poh camp.

2. Demand for Condom increased.

The demand for condoms has been increasing ever since. The figures below show the trend of condom use from February 1999 to February 2000.
Condom distribution by person from February 1999 to February 2000.

Source: Monthly condom distribution, CHE program.
KEYS TO CHANGE

1. Finding a representative, and/or community outlet. Find people who can help and spread information.

2. Participate in community meetings, events and observe the people in the community. This will help to find the persons mentioned previously.

3. Arrange focus group discussions with community groups to collect information, and to learn their beliefs and practices. Then more culturally sensitive services can be provided.

4. Start where people are. Do not force people to change their habits, instead listen to them and learn from them what they know, so that their strong and weak points can be detected and strengthened.

5. Evaluate the activities. The right steps can be taken to achieve our goals. If not, it is like being a traveler without a map.
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Contraception: Giving The Oral Contraceptive Pill

Suzanne Belton

The contraceptive pill is a safe method of preventing a pregnancy but it needs to be given in the medically correct way. This article explains how it works, how to prescribe it and information that all women should receive.

Living and loving in Thailand

Paw Wah walked towards the big, gray factory with her friends. She liked the early mornings when the air was still cool and the birds sang. The factory work was boring and it gave her headache but she had made so many good friends. There were young men at the factory too and sometimes in the evening they would all sit together, eating spicy lopetho and laugh. She missed her mother and father and every month she sent them as much money as she could afford. She often felt homesick and she tried not to cry. There was one young man who made her laugh a lot and every time she was with him she felt very happy. Over the months she began to fall in love with him and they talked about getting married. Paw Wah wished her elder sister were with her so she could ask her what to do. Paw Wah knew that things were different now, not like in the old days in the village. There in Thailand people were saying and doing things that would have seemed impossible at home. Paw Wah knew that soon she would sleep with the man she loved and be like his wife. She felt to lonely at times that it was difficult to stop the feeling she had for him. She was frightened that she might get pregnant before they could get married. She was frightened what her father would say. She was frightened to think of her mother’s sadness if she went home pregnant and not yet married. Paw Wah decided to get the medicine that stopped babies.

At the clinic

The medic listened to Paw Wah’s story about leaving home, the factory and the special young man in her life. The medic had heard many similar stories before but often the young women were already desperate and pregnant or sick from the dirty abortion. The medic told the young woman she was clever to come to the clinic before sleeping with the young man. The medic talked for a long time with Paw Wah about her feelings and it seemed that Paw Wah was very much in love and wanted to encourage the young man to marry her. The medic realized that Paw Wah was far from home and for many reasons likely to sleep with her boyfriend. She was at risk of getting pregnant. The medic knew that the boyfriends did not always marry the young women they had promised and often left them. The medic also thought about her risk of catching HIV.
After the medic had completed the medical and social history and recorded it in Paw Wah’s notes, she took her to a private room to check her blood pressure, test her urine (for sugar and albumin) and do a physical examination. Paw Wah was quite shy but the medic talked to her gently and helped her to feel calm. It seemed that Paw Wah was a healthy young woman who had regular but painful periods. She never had sex yet and so had never been pregnant. She did not smoke and her blood pressure was normal. The medic asked Paw Wah if she understood about how the body worked. Paw Wah admitted that no one ever told her but she knew that now she had her period it was possible for her to make a baby but she was unclear about many details.

A medical history includes:
- Asking about general health, how many pregnancies a woman had and how many births.
- It is good to check BP, urine, weight, and general physical examination.
- A vaginal examination is generally necessary, but not always. It might be a sensitive issue, for example, a single woman not willing to tell the medic that she is not virgin.

The medic is a teacher

The medic was not surprised and she thought back before she had begun her training and how little she knew. The medic slowly began talking about the uterus, the ovaries and how babies were made by men and women. She showed Paw Wah some pictures to help her understand. Paw Wah listened carefully and she was so interested she nearly forgot to blink her eyes. So she began to understand about the woman’s egg and the man’s sperm – so that’s the secret, she thought!! The medic also talked about a terrible illness called AIDS and wanted to show Paw Wah the condom. Paw Wah went bright red in the face and said that her boyfriend would never use one of these rubber things. The medic was disappointed that Paw Wah could not overcome her embarrassment but offered to talk with her boyfriend if she brought him to the clinic next time. The medic suggested that Paw Wah try the contraceptive pill because it was very safe, highly effective if taken regularly and
### Important points to remember

- The oral contraceptive pill works **99%** of the time if taken regularly
- The oral contraceptive pill is very safe to use
- Women should be given some written information if they can read and invited back to the clinic to learn more about the pill
- Women should be warned about the common side effects of the pill
- Women should understand that it does not protect them from STDs or AIDS
- The oral contraceptive pill (2 hormones) should not be used by women who have babies under 6 months and who are breast feeding
- The oral contraceptive pill should not be used by women who has high blood pressure, heart disease, sever liver disease, diabetes, a blood clot, breast, uterine or cervix cancer.
- If the woman is over 35 years, overweight or a smoker, she may need to choose a different contraceptive with no estrogen in it.
Wah said that she had to work morning shift everyday except Sunday and because her life was routine, she thought she could remember. “Will I get pregnant if I forget to take the pill?” Paw Wah asked. The medic said that she should take the pill at the same time each day and if she forgot more than 2 pills, she should do the 7 day rule. The medic said that if she ever had vomiting or diarrhea or took antibiotics, she should do the 7 day rule too.

This was a lot to remember and Paw Wah’s head felt dizzy. The medic smiled and asked her if she could read. Paw Wah had been to school and could read quite well. So she was happy to get the paper with all the rules and information from the medic written on it. Well, now Paw Wah understood how the contraceptive pill worked, what types of things could stop the pill from working and a plan of action if she forgot her pill. It sounded so good to Paw Wah that she wanted to start right now.

The medic said that she had more things to tell her first before she could give her the pills. The chemicals inside the pill she explained, are quite strong and it can make the woman feel different. In the first 3 months of taking the pill, women often notice that they feel a bit sick, have painful breasts, get headaches and that her period comes at the wrong time. She reassured Paw Wah that these feeling would eventually stop. She also told Paw Wah to put lots of thanakha on her face because the pill changed the skin like when they are pregnant. She gave Paw Wah 3 months supply of the pill and told her that she would be safe to have sex after 7 days of taking the coloured hormonal pills, but the pills must be started within the first 5 days of her period. Paw Wah tucked the packets inside her cloth bag and thought about how different life was in Thailand.
A  Medical personnel
1. Shape, size, consistency, tenderness, mobile or fixed, percussion
2. Appendicular mass, amoeboma, tubo-ovarian mass, ovarian cyst (or any four from issue No. 7, page 57)
3. 2HRZ/4HR
4. 300 fields

B  Non medical personnel
5. All the medicines should be taken properly for the correct number of months
6. Financial, rejection by others, marital disharmony, inability to produce more children
7. Prenatal care and malaria in pregnancy
8. Home visit teaching

C  Both medical and non-medical personnel
9. Weight loss, fever, chest pain, night sweats, loss of appetite, tiredness, productive cough, hemoptysis, shortness of breath (note: any four from the above)
10. Multi Drug Resistant-TB
11. a) 
12. No appetite, vomitting, fever for 3 or more days, tingling sensation of fingures or toes, (or any four from the symptoms mentioned in issue No.7, page 65)
13. Threatened, inevitable, incomplete, missed.
14. a) Adults - 14-18/min  
 b) Children - 30/min  
 c) Babies - 40/min
15. Closed fracture and open fracture
17. Urine
18. Between 30 and 50 years.

Answer to Test 1 for the year 2000
Total number of respondents = 221
Medical personnel = 102
Nonmedical personnel = 119
Full Marks = 30

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<th>MARKS OBTAINED</th>
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<th>NONMEDICAL PERSONNEL</th>
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TOTAL 102 120 119

Medical personnel’s highest score = 30 by 2 persons
1. Saw Gilvary Hla, Medic, SMRU, Mae La camp
2. Naw Eh Paw, Clinic I, SMRU

Nonmedical personnel’s highest score = 29.5 by 25 persons
Congratulations to them!!
Letter from the field

Dear Editor,

I would like to read articles about dental problems, because I have seen many patients with dental problems like, pulpitis, gingivitis. Some patients come with pulpitis so late that we can’t even give temporary filling. It’s a pity to do extraction. In some children I saw that they get gingivitis with bleeding. This is also found in adults. So I’d like to read about dental problems in the coming issues of Health Messenger. The points I’d like you to discuss are:

• How can we prevent
• How do we need to brush the teeth (technics)
• How can we find a food for gum disease and what kind of food (specially for gingivitis)

Regards.

Hsar Lah, Medic, Nu Poh Camp.
This letter was sent to us by a TB patient at Noh Poh Camp. The letter was written on his behalf by Naw Dah, Medic (ARC)

On 15.6.99 he coughed a little and felt something strange. On 25.6.99, he went for examination at AMI clinic, Nu Poh camp. The result was TB. Later he was admitted into the hospital and he felt depressed. Here, he was alone. Both father and mother had passed away and there was no siblings or relatives near him. Nobody came to the hospital and he felt terribly sorry for himself.

He wanted to hear some encouraging words from his dearest friends while he was sick but nobody came to him. Although he knew that they couldn’t come to him, he would like his brothers or sisters to be near him. So he sent a letter to them, telling about his illness, TB and that he was undergoing treatment.

On 2.7.99 he received some letters from his brothers and sisters encouraging him not to get depressed by TB and they had heard that TB could be cured and he would be alright. After getting their letters, he cried. He wanted them to be near him more than anything else. Although he was sad, he didn’t forget to take his medicines regularly.

On 10.12.99, after six months of treatment, the medical check-up showed that he had no symptoms or signs of TB. Now he is in good health. He feels great relief.

How happy he is!!!
a-u miů av; ta x mi fy ŋif o C̈ y əzːf t ʃ ysm ᵯu3: (Gordon Sharmars, WEAVE)

1? w c ̈ w ʃ r, ʃ ify ̈ j x w ̈ wc a v ̈ w C ̈ ə g ̈ r ̈ də, mi q ̈ w ̈ h u ̈ mi fr ̈ u ̈ D m t ax mi fE t ʃ ryq ̈ jo m�; ŋu mił ̈ E qEt w laex ̈ ə w y ̈

2? o m�; aw G w ʃ e f o i ̈ qw ̈ dy ̈ ft m ̈ u ḱ g ̈ d r ̈ D ̈ r, mi ʃ n a ̈ u mï n̈ i f r ̈ ʃ m�; ̈ a u k m敬畏 t u f a r G ̈ r ̈ fa ̈ u mï ə y a ̈ w G ḱ o m�; ̈ a w G ̈ y ̈ D ̈ o ̈ i f u m; ̈ a v ̈ b ̈ â y y g ̈ w ̈ , f

ʊ j=t ʃ ryq ə fu ! pr̈ ̈
Distance Learning Health Magazine