Manage TB
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Lecture - 06
Clinical manifestations of Tuberculosis
Session 01

Welcome to the session on Clinical manifestations of Tuberculosis, I am Dr. Poorana Ganga Devi, scientist from National Institute for Research in TB. Now, I am going to brief about the Clinical manifestations of pulmonary TB and some common forms of extra pulmonary TB.

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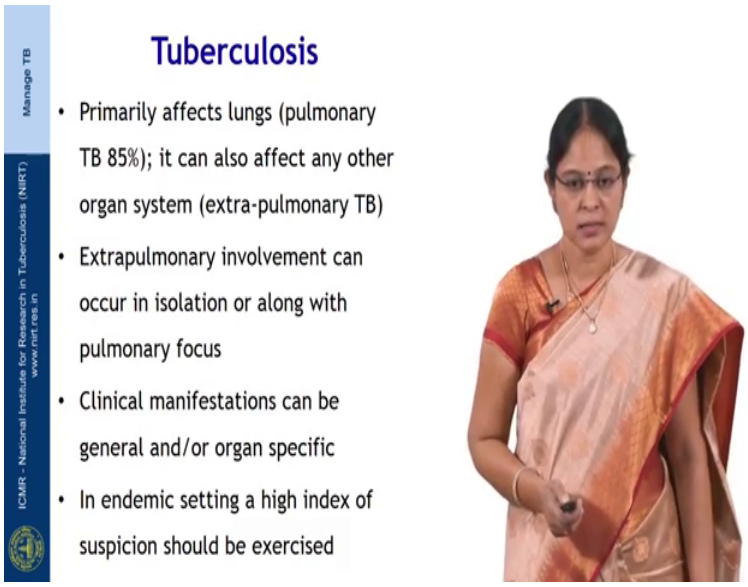

TB primarily effects the lung which constitutes 85 percent of total cases of TB, which we refer as pulmonary TB. It can although effect any other organ system in our body other than the lung, which we commonly refer as extra pulmonary TB.

Extra pulmonary involvement can occur either in isolation or along with the primary with the pulmonary focus. Clinical manifestation can be either general or it can be organ specific; one should have a high index of suspicion, in endemic setting while we are investigating for TB.

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The general symptoms of TB usually a unexplained fever of long duration, loss of weight, loss of appetite, night sweats, fatigue or tiredness and in children a failure to thrive may be the only symptom, from which they seek medical advice.

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Clinical manifestations of pulmonary TB includes chronic cough which maybe either productive or dry, it may usually lasting for more than 2 weeks, blood in the sputum which we refer as Haemoptysis, chest pain, difficulty in breathing dyspnoea and other systemic symptoms such as fever, weight loss, anorexia and lassitude.

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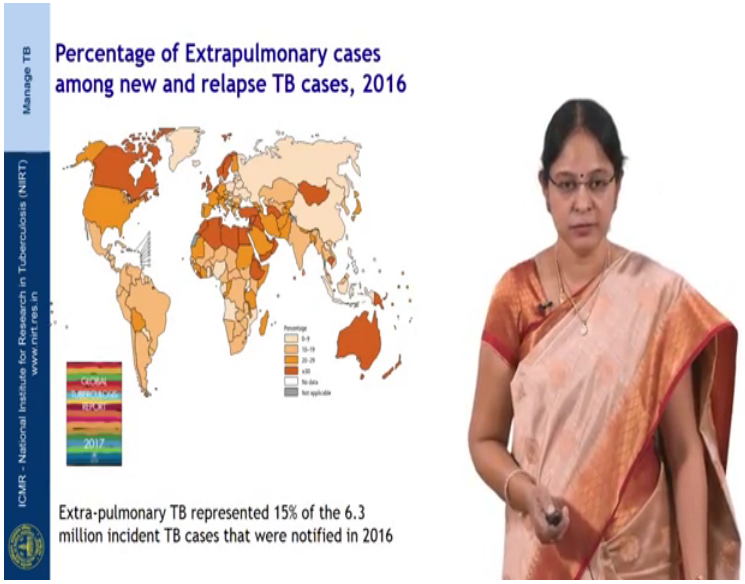

This map refers to the percentage of extra pulmonary cases, among the new and relapse TB cases in the year 2016. Of the 6.3 million incident TB cases, that when notified in 2016, extra pulmonary TB alone accounts for 15 percent of the total cases.

The darker area in the map refers to places, with the higher proportion of extra pulmonary cases and the darker orange color represents areas with more than 30 percent of extra pulmonary cases being reported.

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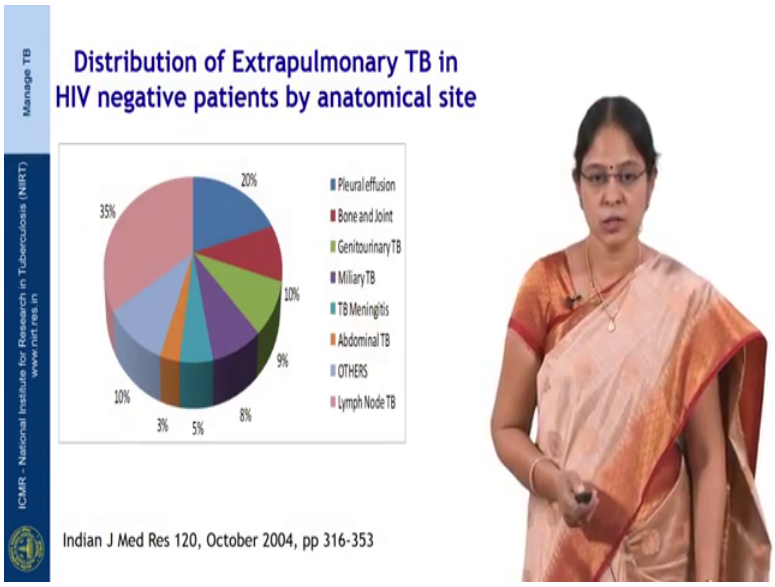

This phi chart shows the distribution of extra pulmonary TB. In HIV negative patients, by anatomical site. From the chart, we come to know that the most common form the lymph node TB accounts for 35 percent of all the cases and the next common pleural effusion accounts for 20 percent of all the cases.

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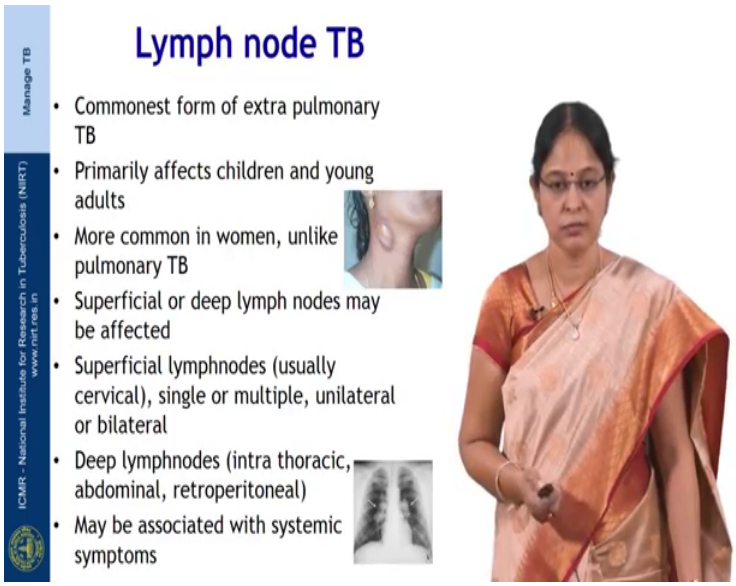

The other common forms of extra pulmonary TB ranges from 3 to 10 percent; Lymph node TB is a commonest form of extra pulmonary TB. It primarily affects the children and the young adults, it is more common among common in women unlike the pulmonary TB which is common in men.

It affects both the superficial and deep lymph nodes, superficial nodes among the superficial lymph nodes, cervical lymph nodes is a most commonest one, which usually presents as either as single or multiple nodes, either on unilateral or bilateral.

Deep lymph nodes are also involved, the most common side being the intra thoracic, abdominal and retroperitoneal.

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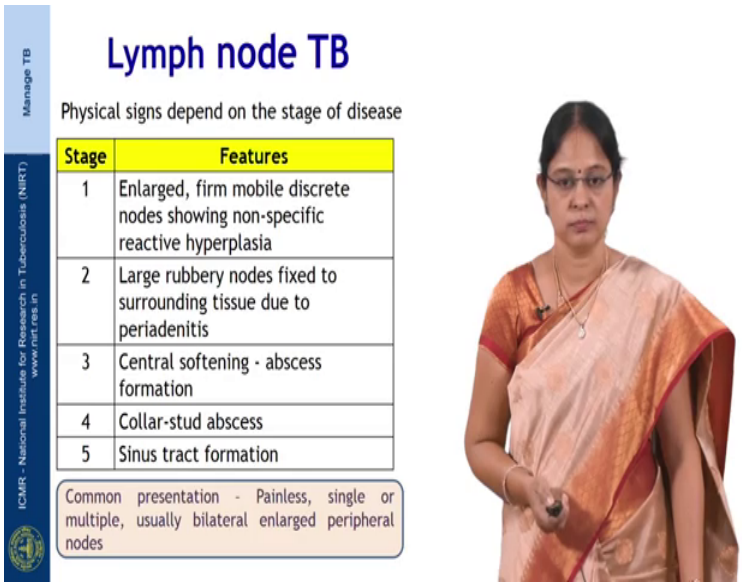

It may be associated with systemic symptoms, such as fever, weight loss, loss of appetite. Physical presentation depends on the stage of the lymph node TB. In stage 1, we can see enlarge, firm mobile discrete nodes, showing nonspecific reactive hyperplasia.

When the nodes are large rubbery fixed to the surrounding tissue due to periadenitis, it refers to the stage 2. Later the lymph nodes shows central softening, resulting in abscess formation, proceeding to the collar stud abscess and sinus stud formation.

But the most common presentation in clinical practice includes painless, single or multiple, unilateral or bilateral enlarged peripheral nodes.

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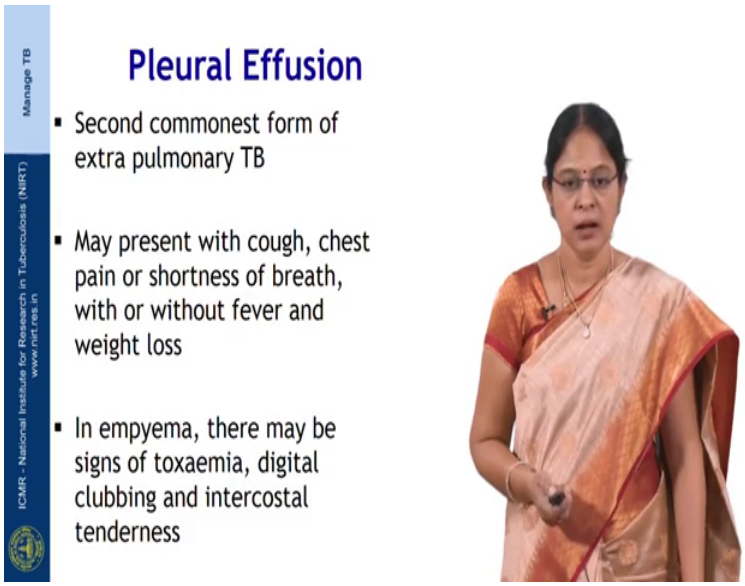

The second commonest form of extra pulmonary TB is pleural effusion. It usually present with cough, chest pain or shortness of breath, with or without fever and weight loss. In empyema, where there is pleural collection of pus in the pleural space, there may be science of toxaemia, in addition to the other symptoms along with digital clubbing and intercostal tenderness.

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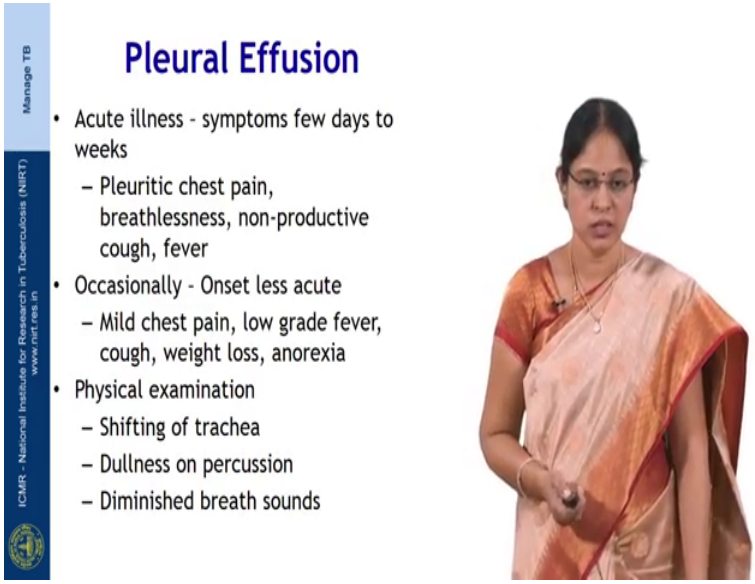

Pleural effusion usually present as an acute illness, unless symptoms usually last for few days to few weeks, with the symptoms of pleuritic chest pain, breathlessness, non

productive cough and fever. Occasionally, the onset may be less acute, with mild chest pain, low grade fever, cough, weight loss and anorexia. On physical examination, we can see we can note down the shifting of the trachea, on percussion we can have a dull node, on auscultation the breath sounds are usually diminished.

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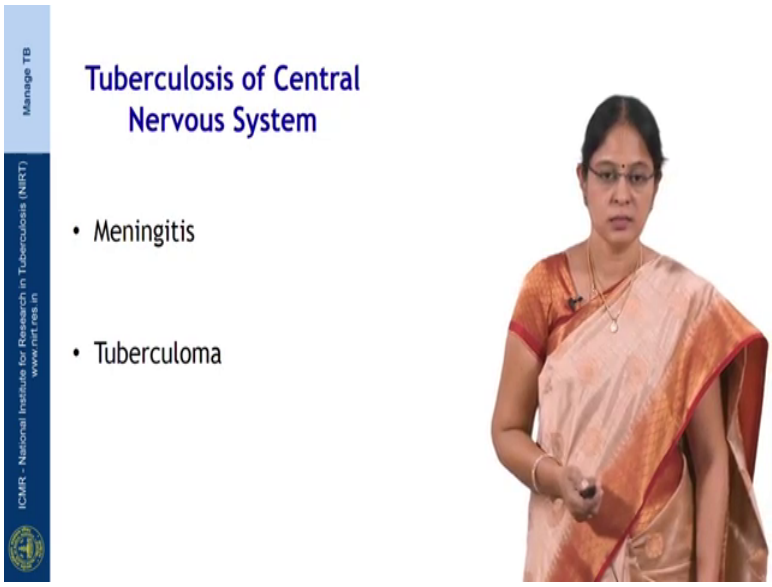

Meningitis and tuberculoma, are the two common forms of central nervous system TB.

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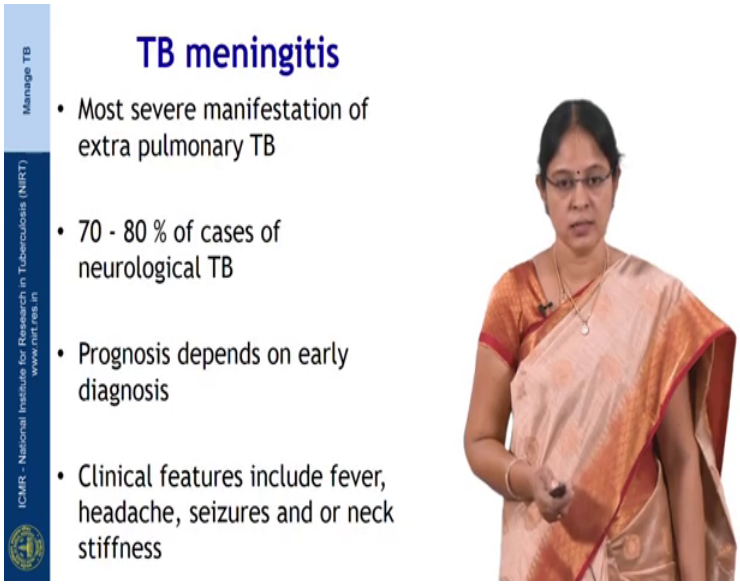

TB meningitis is a most severe manifestation of extra pulmonary TB, of all the cases of neurological TB, it accounts for 70 to 80 percent of the cases. The Prognosis usually

depends on the early diagnosis and the most common clinical features include fever, headache, seizures and or neck stiffness.

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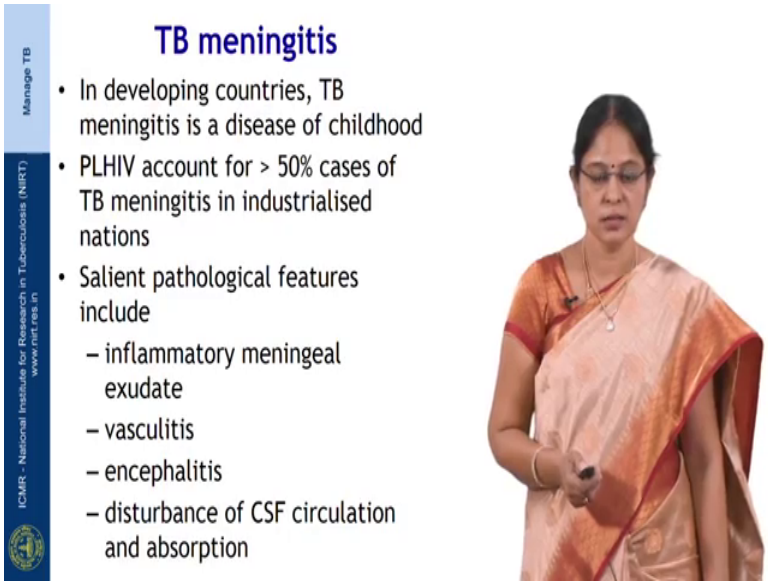

TB meningitis is a disease of the childhood in developing countries, on in industrialized nation people leaving on HIV account for more than 50 percent of cases of TB meningitis. The pathological features include inflammatory meningeal exudates, vasculitis, encephalitis, disturbance of the CSF circulation and absorption.

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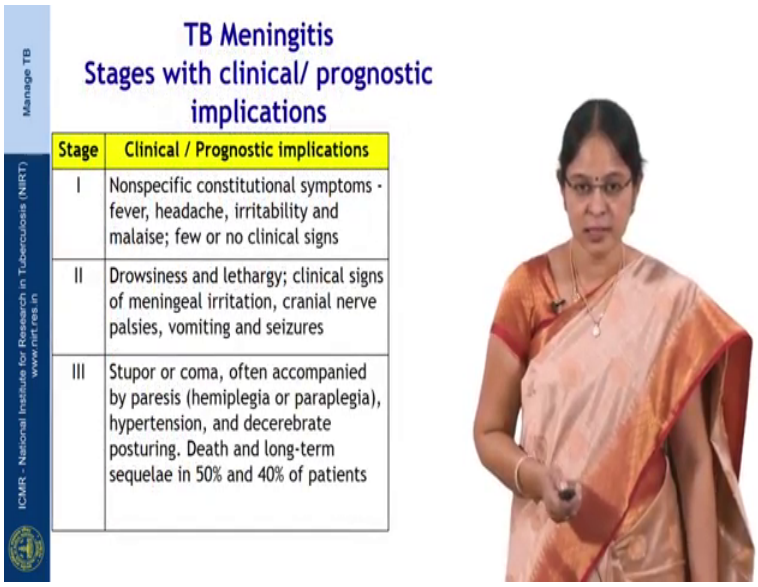

British medical research council had developed a method for staging the TB meningitis. The stage 1 describes the early non-specific science and symptoms, which includes fever, headache, irritability and malaise, few or no clinical signs.

Stage 2 describes the neurological disturbances, without coma or delirium, but with few minor neurological disturbance including drowsiness, lethargy, clinical signs of meningeal irritation, cranial nerve palsies, vomiting and seizures.

Stage 3 describes an advance stage with stupor or coma, often accompanied by paresis, hemiplegia or paraplegia, hypertension and posture changes, long term sequelae can occur in 40 percent of patient and death in almost 50 percent of patients in stage 3 condition.

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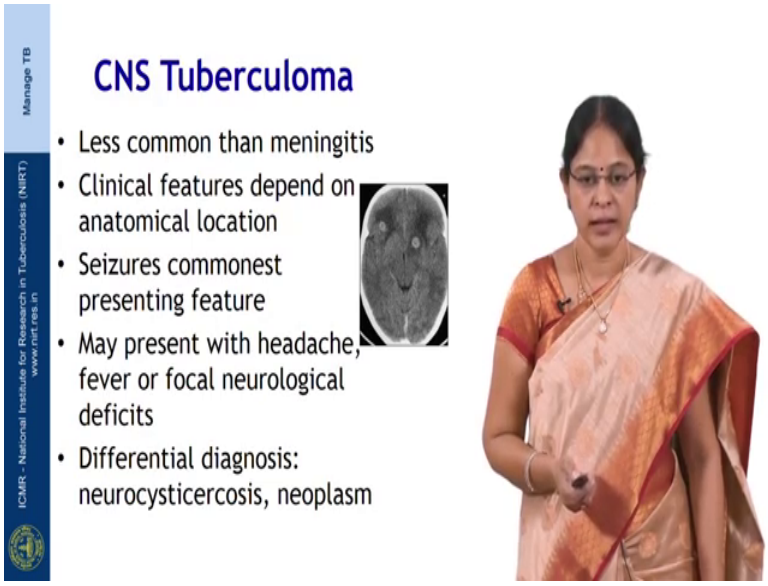

CNS Tuberculoma is a less common than meningitis, the usual clinical features depends on the anatomical location. Seizure is a most common presenting feature and it may present with headache, fever or focal neurological deficits.

One should be able to differentiate it from neurocysticercosis and neoplasm, with the help of pathological and radiological findings.

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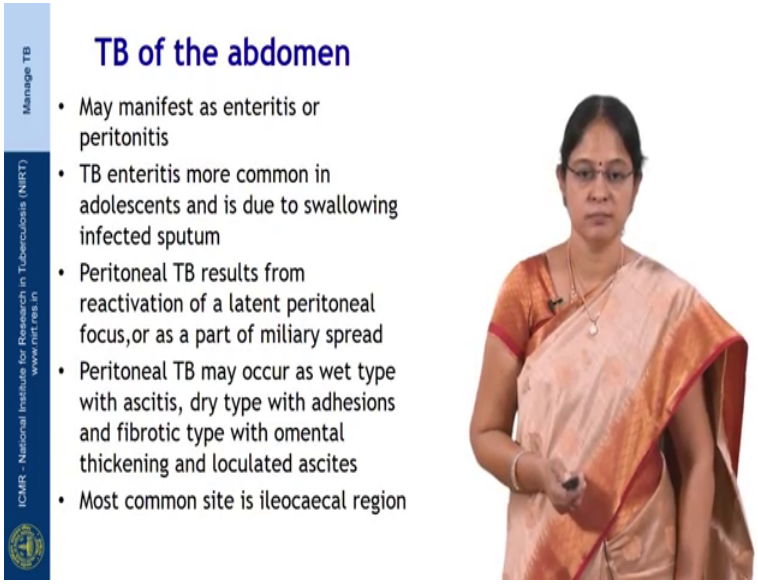

TB of the abdomen usually manifest as enteritis or peritonitis. TB enteritis is more common in the adolescents and it is due to swallowing the infected sputum.

Peritoneal TB results from the reactivation of a latent, peritoneal focus, or as a part of military spread. Peritoneal TB may occur in any of the any one of the three forms, where the wet ascitis type is a most commonest one; with collection of via loculated fluid and the abdomen, with dry type with adhesions and the fixed fibrotic type where there is omental thickening.

The most commonest site of a TB of abdomen occurs in the ileocaecal region.

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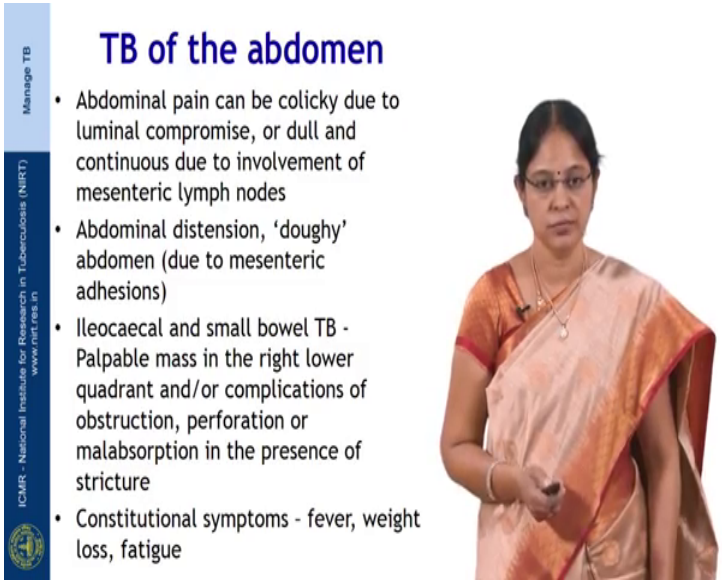

The usual presenting symptom will be abdomen pain, which can be colicky due to the luminal compromise, if there is involvement of the mesenteric lymph nodes, the abdomen pain will be dull and continuous. There will be distension of the abdomen, which is referred as a doughy abdomen, due to this occurs due to the mesenteric adhesions.

When there is involvement of the ileocaecal and small bubble. A mass can be palpable in the right lower quadrant and, or there can be complication of obstruction, perforation or malabsorption in the presence of structure. The TB abdomen also can present with constitutional symptoms, such as fever, weight loss and fatigue.

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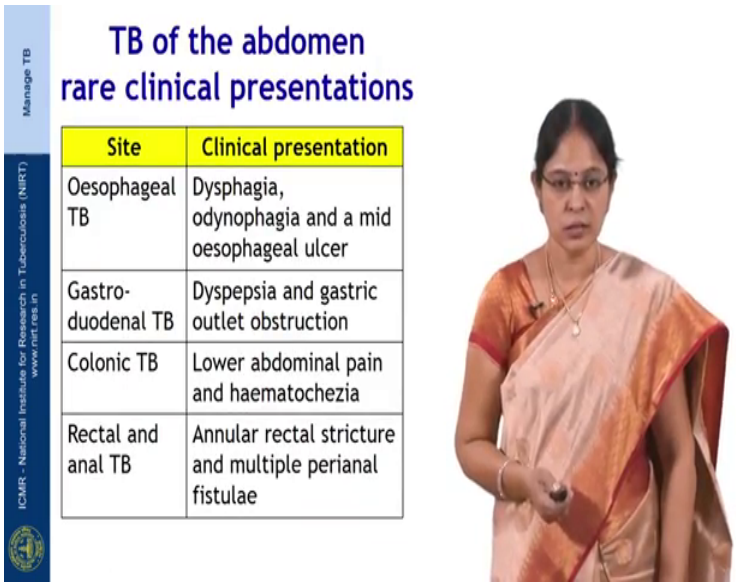

Let us look into some rare clinical presentation of TB abdomen. Oesophageal TB presents with dysphagia, odynophagia and a mid oesophageal ulcer, gastroduodenal TB presents with dyspepsia and gastric outlet obstruction.

When there a patient complaints of lower abdominal pain and passage of fresh blood in the stool; one should able to rule out colonic TB, rectal and anal TB usually presents as strictures and perianal fistulae.

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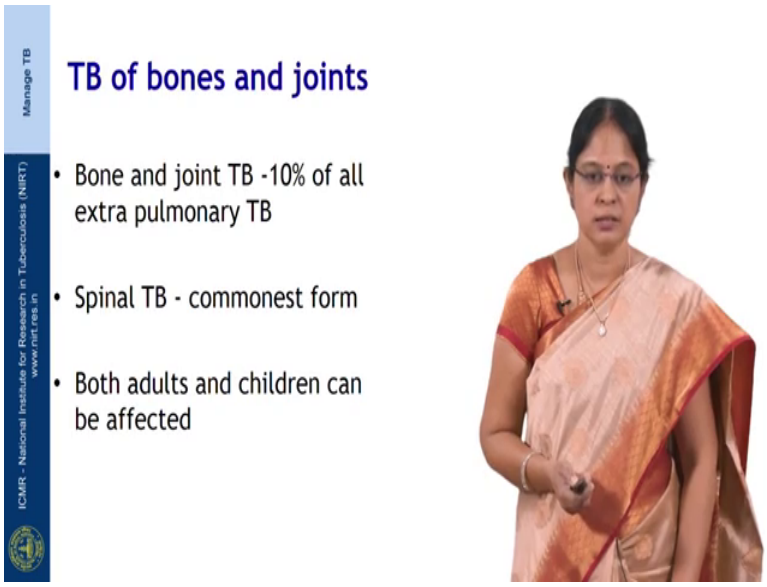

Bone and joint TB it accounts were 10 percent of all the extra pulmonary TB. Spinal TB is the commonest form, it occurs in both in adults and children.

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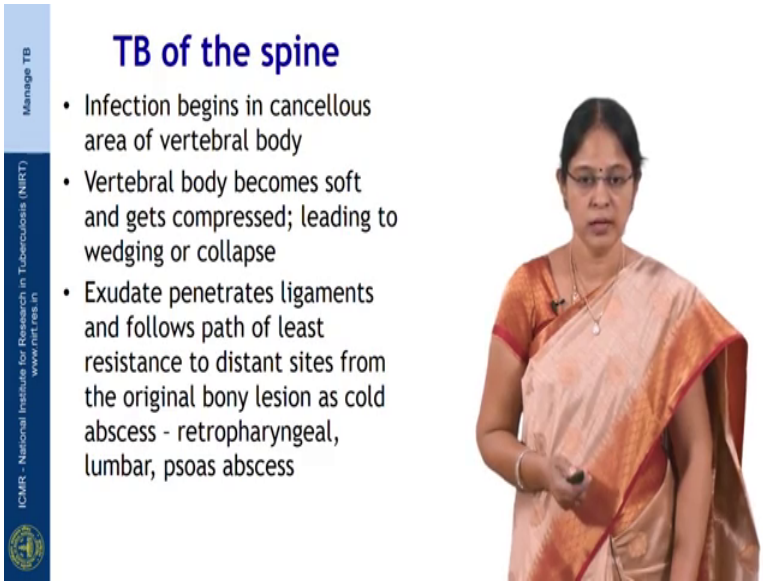

The infection usually begins in the cancellous area of the vertebral body, where the vertebral body becomes soft and gets compressed; leading to wedging or collapse of the vertebrate.

The exudates then penetrates the ligaments and follows the path of least resistance to the planes, to distant sites from the original bony lesions where the form the cold abscess, cold abscess can occur in retropharyngeal area, lumbar and in the psoas region.

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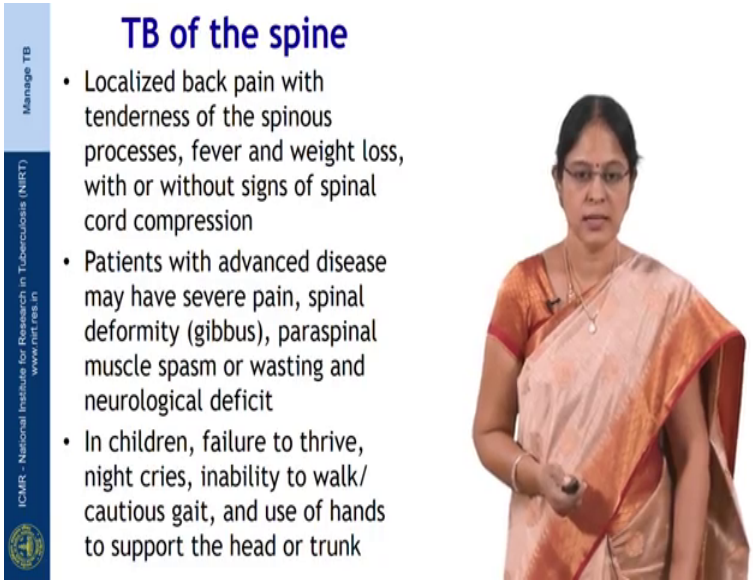

Usually the patient complaints of localized back pain with tenderness of this spinous process, fever and weight loss. There may be signs of spinal cord compression also.

Patients with advanced disease may have severe pain, spinal deformity such as gibbus, where there is flexion deformity, are the most common in the lower thoracic and upper lumber area, paraspinal muscle spasm or wasting and neurological deficit.

In children, the presenting symptoms maybe failure to thrive, night cries, inability to walk or cautious gait, use of hands to support the head or trunk.

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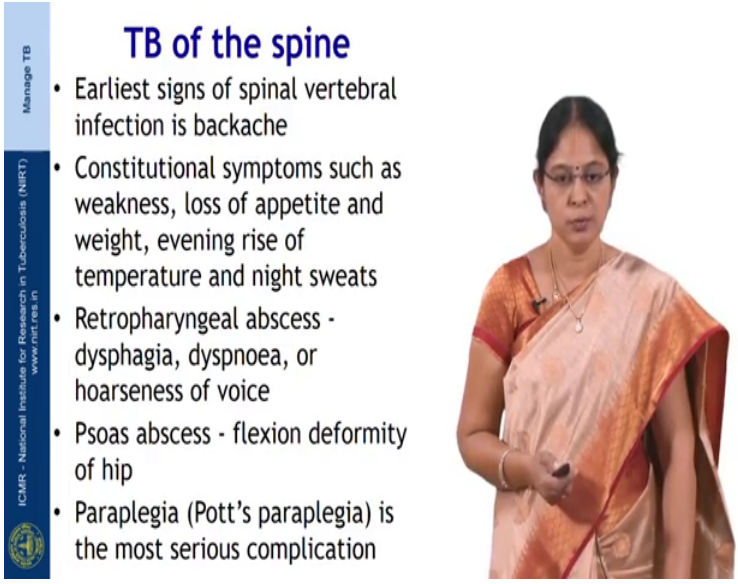

The earliest sign of spinal vertebral Infection is backache. The constitutional symptoms such as weakness, loss of appetite and weight, evening rise of temperature and night sweats may also be present.

When there is retropharyngeal abscess, the patient may complaint of dysphagia, dyspnoea, or hoarseness of voice. There may be flexion deformity of the hip in case of psoas abscess and the most serious complication of the TB spine is the Pott's Paraplegia.

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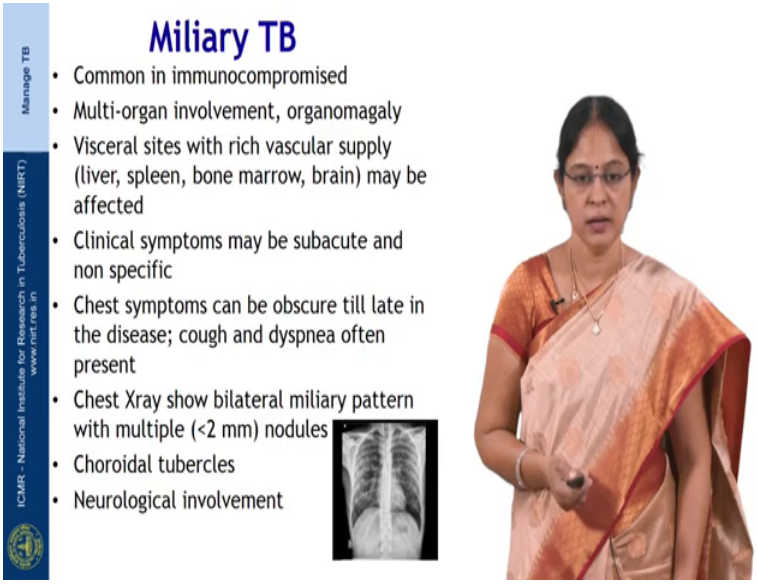

Military TB is most common in immunocompromised individuals such as HIV patients. Usually there is multi organ involvement, the visceral sites with rich vascular supply such as liver, spleen, bone marrow and brain, are usually affected.

The clinical symptoms maybe subacute and non specific, the chest symptoms can be obscure till late in the disease; and cough and dyspnea can be the only presenting complain. Chest X-ray usually shows, bilateral military pattern with multiple nodules of less than 2 millimeter size; it will be like this. An involvement of the eye can occur with choroidal tubercles and neurological involvement may occur in widespread disease.

Thank you all, with this we come to the end of the session 1 on clinical manifestations of TB and some common forms of extra pulmonary TB.