Manage TB
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Lecture – 07
Clinical manifestations of TB
Session 02

Hello, welcome to the second session on Clinical manifestations of tuberculosis. I am Dr. Dina; Scientist working at the National Institute for Research in Tuberculosis Indian council of medical research.

In the first session my colleague Dr. Poorna had talked about the clinical manifestations of pulmonary TB and also TB affecting the central nervous system, lymph node, pleura abdomen and the spine. In this session we will be covering the other extra pulmonary sites, which can be affected by tuberculosis and which could be of importance to a clinician.

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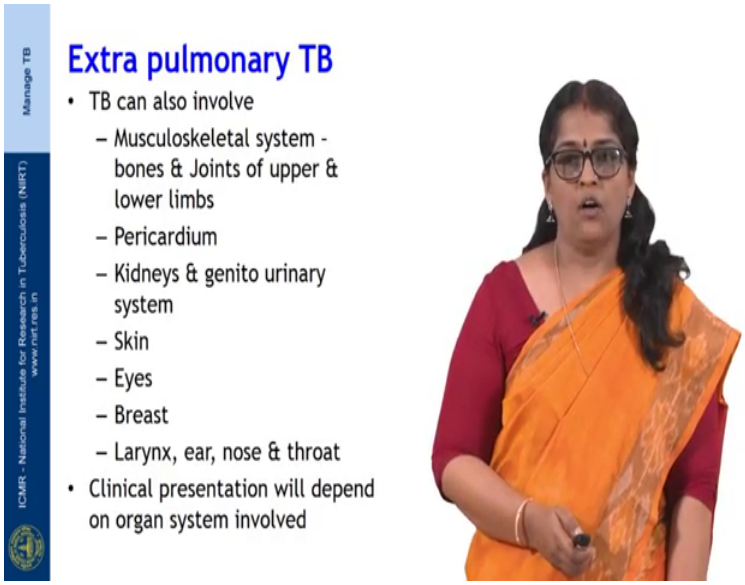

So, apart from other organs, TB can also involve musculoskeletal system involving the bones and joints of the upper and lower limbs, the pericardium kidneys and genitourinary system, the skin, eyes, breast, larynx, ear nose and throat. And the clinical presentation will depend on the organ system involved.

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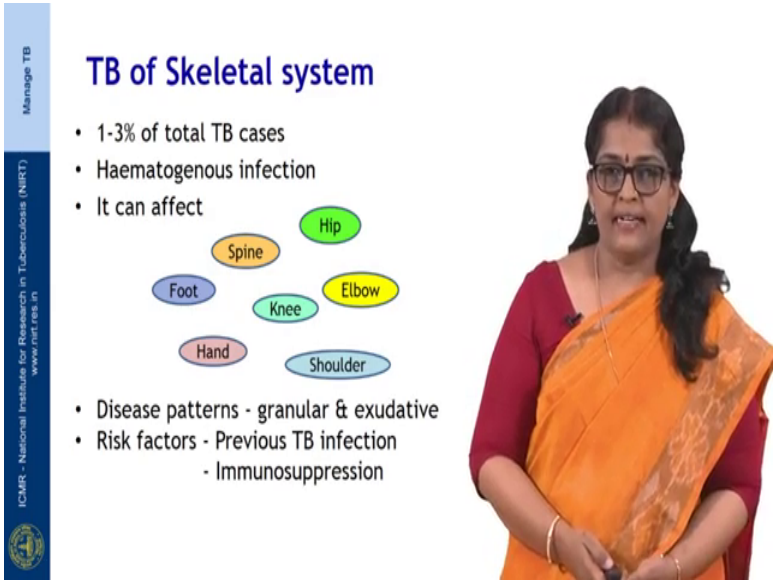

So, coming on TB of skeletal system, this accounts for about 1 to 3 percent of the total TB cases. Skeletal TB is usually haematogenous infection with primary pathology in the lung. It can affect almost all bones; the spine and hip joint are the most commonly affected. It can also affect the foot and hand bones also the knee joint and the elbow joint, shoulder joint may be rarely effected.

Two main patterns of the disease are identified the granular and the exudative. The exudative is also known as caseous. The risk factors for developing TB of the skeletal system include previous TB infection and also immunosuppressive conditions like diabetes, HIV, chronic liver and kidney diseases.

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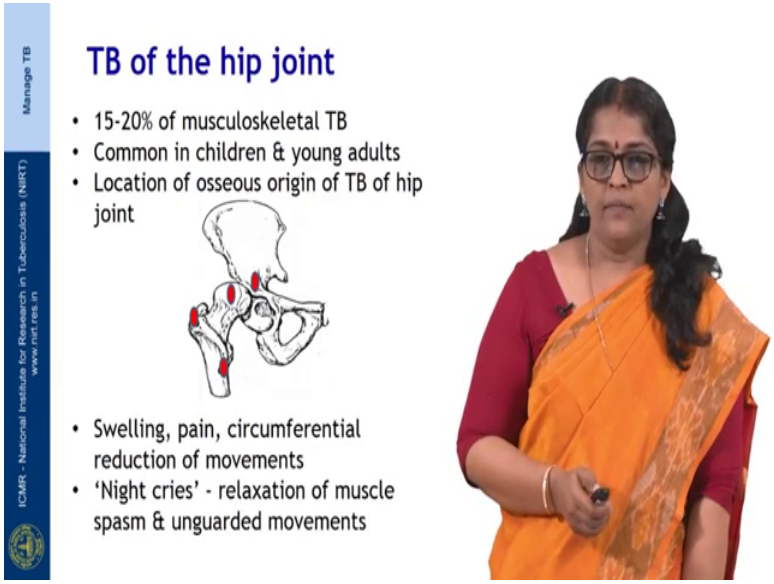

See TB of the hip joint. This accounts for 15 to 20 percent of the musculoskeletal TB; though it can affect any age group it is more common in children and young adults. This is a diagrammatic representation of the location of osseeous origin of TB of the hip joint. These are the sites where the bacteria gets lodges first and then it starts the destructive process. The sides are acetabular, femoral head or the epifisis, femoral neck or the greater trochanter.

Patients present with swelling pain and circumferential reduction of movements, night cries may also develop due to relaxation of muscles spasm and unguarded movements.

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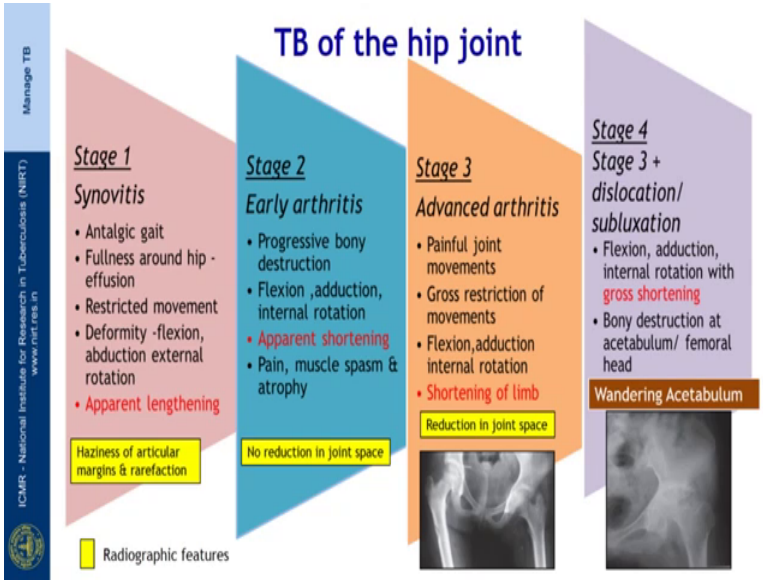

So, TB of the hip joint, there are various stages. Stage 1 is a stage of synovitis this is of insidious onset patients present with pain and a limb the so called antalgic gait. There is fullness around the hip joint, due to joint effusions movements are restricted and also there is deformity, the form of flexion, abduction, external rotation and apparent lengthening.

The stage 2 is the stage of early arthritis where there is progressive bony destruction, limb reflex addicted and internally rotated with apparent shortening. There is also pain muscle spasm and atrophy. Stage 3 is a stage of advanced arthritis, the joint movements are painful this growth restriction of movements, the limb flex addicted and internally rotated by shortening of limb.

Stage 4 is advanced arthritis with dislocation or subluxation. The limb flex addicted internally rotated with gross shortening, there is bony destruction at the acetabulum of femoral head. The radiographic features which are characteristic to each stage, in stage 1 there is haziness of articular margins and rarefaction, in stage 2 of early arthritis there is no reduction in joint space, where as in stage 3 there is reduction in joint space and in the stage 4 the pathological destruction at acetabulum of femoral head causes the wandering acetabulum.

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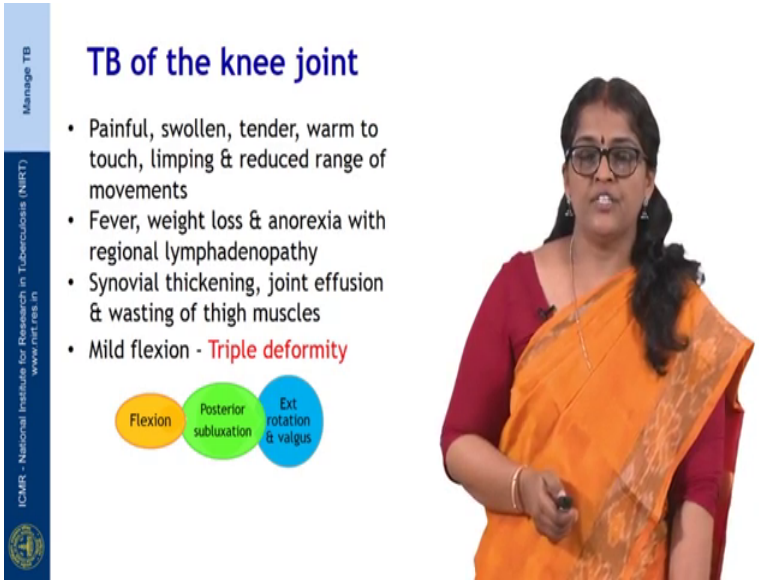

TB of the knee joint; here the patients present with painful swollen tender knee, which is warm to touch limp with limping and reduced range of movements. This fever weight loss and anorexia with regional lymphadenopathy, this synovial thickening joint effusion and wasting of thigh muscles and this deformity ranges from mild flexion to triple deformity.

The severe form is triple deformity, which includes flexion, posterior, subluxation, external rotation and valgus the joint.

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TB of the ankle joint; this commonly affects children and young adults, the slow onset painful swollen ankle with pain on weight bearing, which causes a limp. There is also weight loss anorexia and fever; joint is warm red tender boggy with regional lymphadenopathy and restricted range of movements.

In advance disease there is calf muscle wasting, effusion, discharging sinuses as well as deformity.

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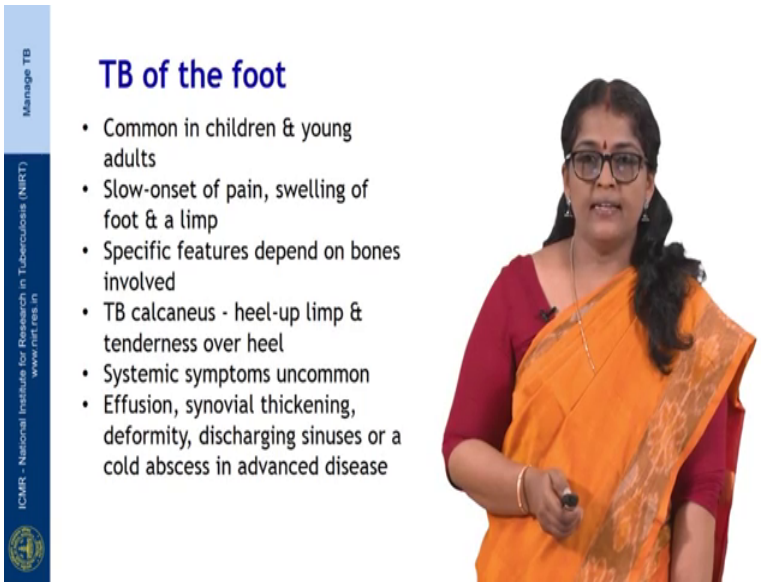

TB of the foot; this is also common in children and young adults, this slow onset of pain and swelling of foot with the limp. Specific features will depend on the bones involved for example, TB of the calcaneus will be presenting with the heel up limp and tenderness over the heel. Systemic symptoms are usually uncommon, effusion synovial thickening, deformity discharging sinuses or a cold abscess are seen in advance disease.

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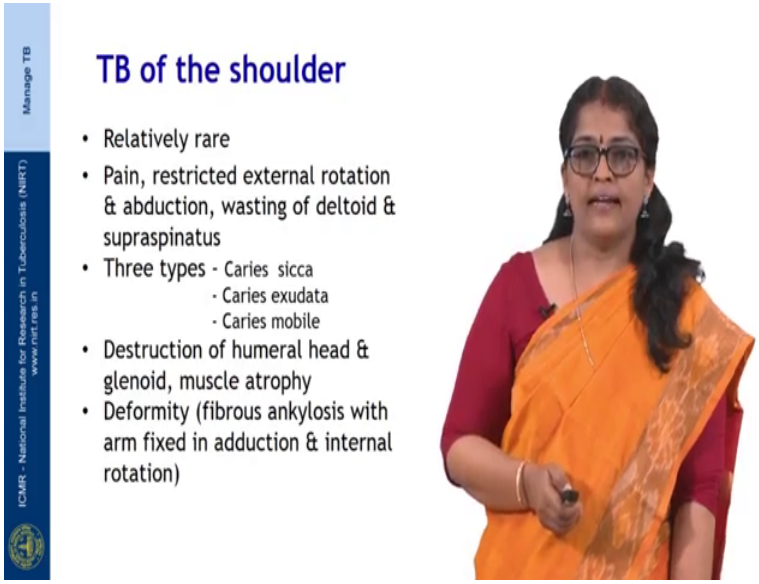

TB of the shoulder; this is relatively rare and commonly occurs in adults. The shoulder pain restricted external rotation and abduction and wasting of deltoid and supraspinatus muscles. Depending upon the presentation there are three types, caries sicca which is the commonest form and is also known as dry arthropathy.

Type 2 is caries exudata and type 3 is caries mobile. This also destruction of humeral head and glenoid cavity with muscle atrophy, in advance disease and deformities in the form of fibrous ankylosis with arm fixed in adduction and internal rotation.

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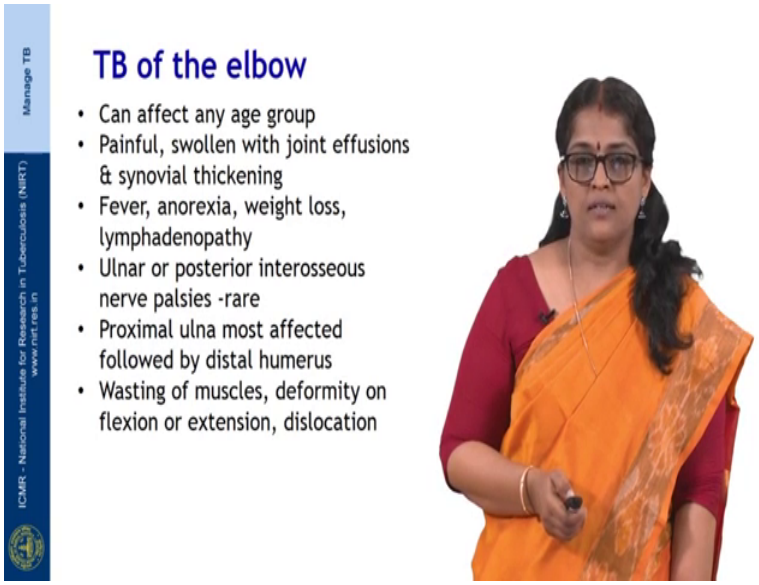

TB of the elbow; this can affect any age group, patients present it is painful swollen joint with effusions and synovial thickening, this fever anorexia weight loss and lymphadenopathy. Rarely it my present as ulnar or posterior interosseous nerve palsies, proximal ulna is most affected followed by distal humerus, this wasting of muscles deformity on flexion or extension and also dislocation in advanced disease.

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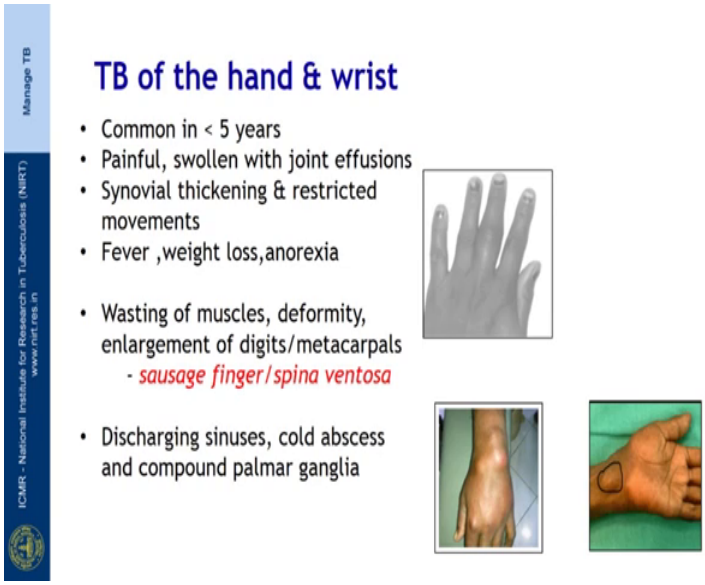

TB of the hand and wrist; this is common in children less than 5 years, hand and wrist bones are painful and swollen with joint effusions, a synovial thickening and movements are restricted.

There is also fever weight loss and anorexia, this wasting of muscles deformity and enlargement of digits or metacarpals, the so, called sausage finger or spina ventosa and also sometimes discharging sinuses cold abscess and compound palmar ganglia may be seen.

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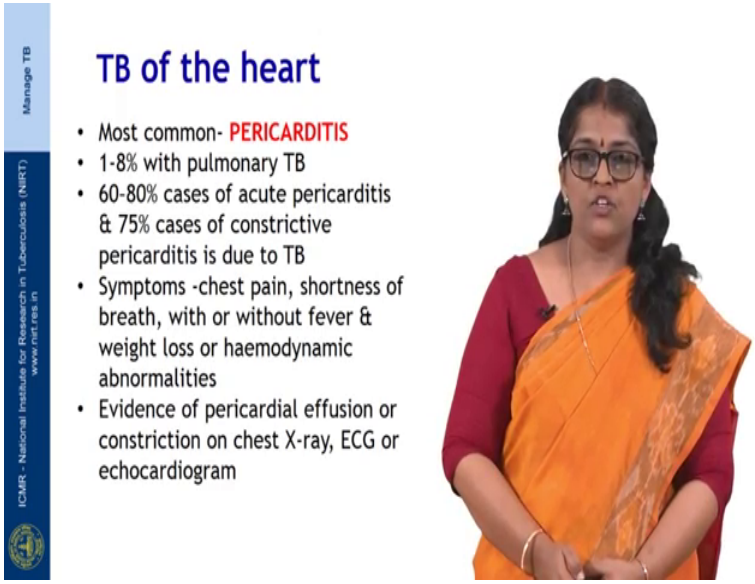

TB of the heart; the most common manifestation is pereicarditis. Pereicarditis is seen in one to eight percent of patients with pulmonary TB. TB pericarditis accounts for 60 to 80 percent of cases of the acute pericarditis in high burden countries and 75 percent cases of constrictive pericarditis.

The symptoms are chest pain shortness of breath with or without fever and weight loss or haemodynamic abnormalities. There is also evidence of pericardial effusion or constriction on chest X-ray ECG or echocardiogram. If a patient presents with these signs and symptoms he must be evaluated for TB pericarditis

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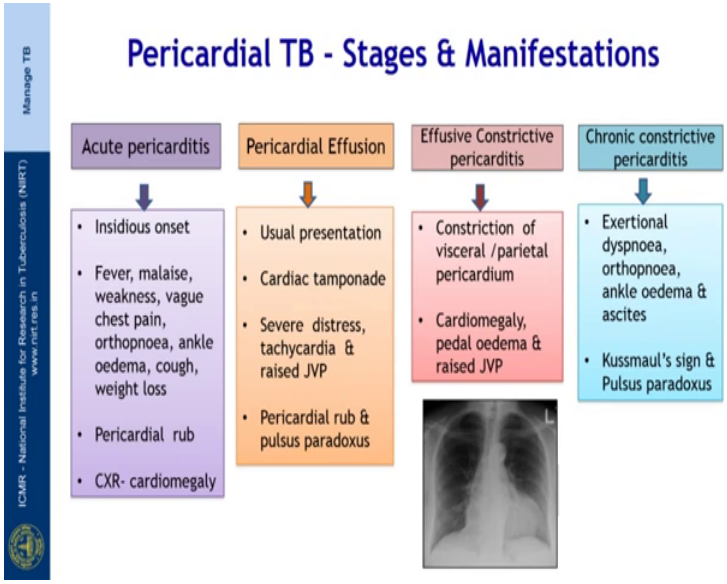

So, the various stages and manifestations in pericardial TB; Pericardial TB can present as acute pericarditis, which is of insidious onset with fever, malaise, weakness, vague, chest pain, orthopnoea, ankle oedema, cough and weight loss. A pericardial rub maybe heard and in chest X-ray cardiomegaly is seen.

Pericardial effusion is also one of the manifestations and this is actually the usual presentation, sometimes it may present as cardiac tamponade the severe distress tachycardia and raised jugla venus pressure, a pericardial rub and pulses paradoxus may also be heard.

It can also present as effusive constructive pericarditis due to involvement of visceral and parietal pericardium. This cardiomegaly pedal oedema and raised jugla venus pressure. And also it can manifest a chronic constructive pericarditis, where exertional dyspnoea, orthopnoea, ankle oedema and ascites, kussmauls sign and pulses paradoxus may be seen.