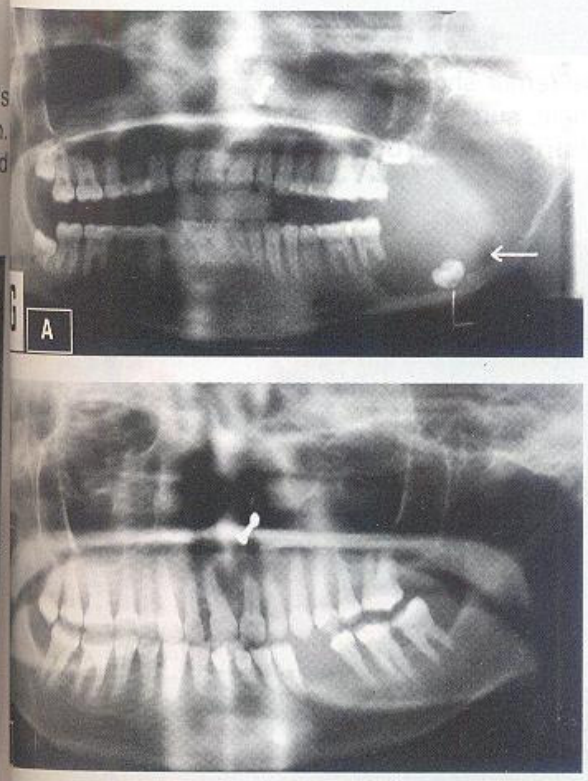
Fig. 4.52: X-ray femur showing osteomyelitis of the femur. Dense bone in the centre – sequestrum can be seen. Surrounding radiolucent area is area of granulation tissue. It signifies separation of the sequestrum. Radiologically sequestrum is denser than normal bone because of lack of normal decalcification (dead bone is dense bone). Sequestrum comes out through an opening, sinus (*cloaca*). Surrounding bone is having new bone formation due to periosteal reaction (*involucrum*). Sequestrum can be *ivory (syphilis)*; *feathery (tuberculosis); granular (salmonella); ring (amputation stump); black (fungal, stump)*. In tuberculous osteomyelitis there is less or no new bone formation.



4.53A and B: Orthopantomogram – OPG. It is taken carcinomas to look for mandibular secondaries, ...ture (fracture mandible), osteomyelitis of the mandible ...w tumours. Patient keeps his/her chin over the ...t of the machine. Machine rotates around the jaw ...to get the film. First film (OPG) shows dentigerous ...t should be differentiated from osteoclastoma.

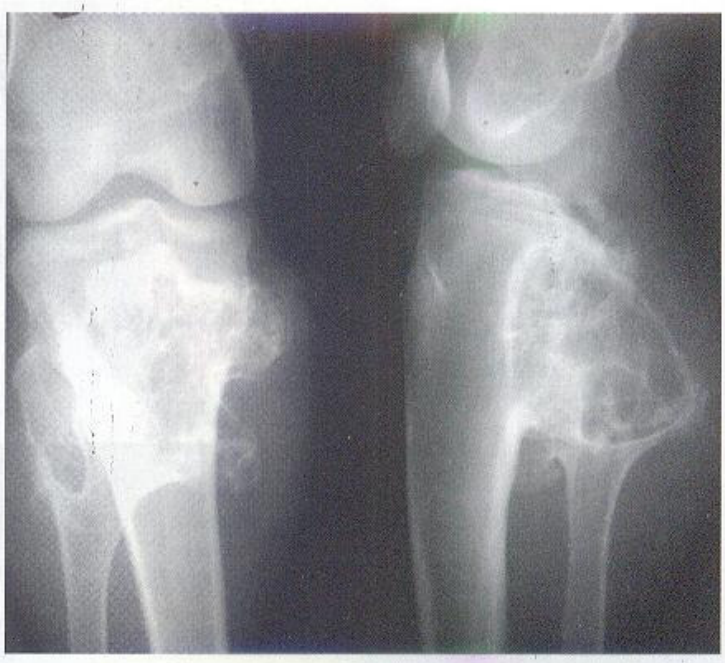


Fig. 4.54: Osteoclastoma of upper end of the fibula. Note the soap bubble appearance. It arises from epiphysis. It also occurs in flat bones.

Fig. 4.55: X-ray lower end of the femur showing features of osteosarcoma. Codman's triangle; sun ray appearance; new bone formation with destruction of bone with pathological fracture.

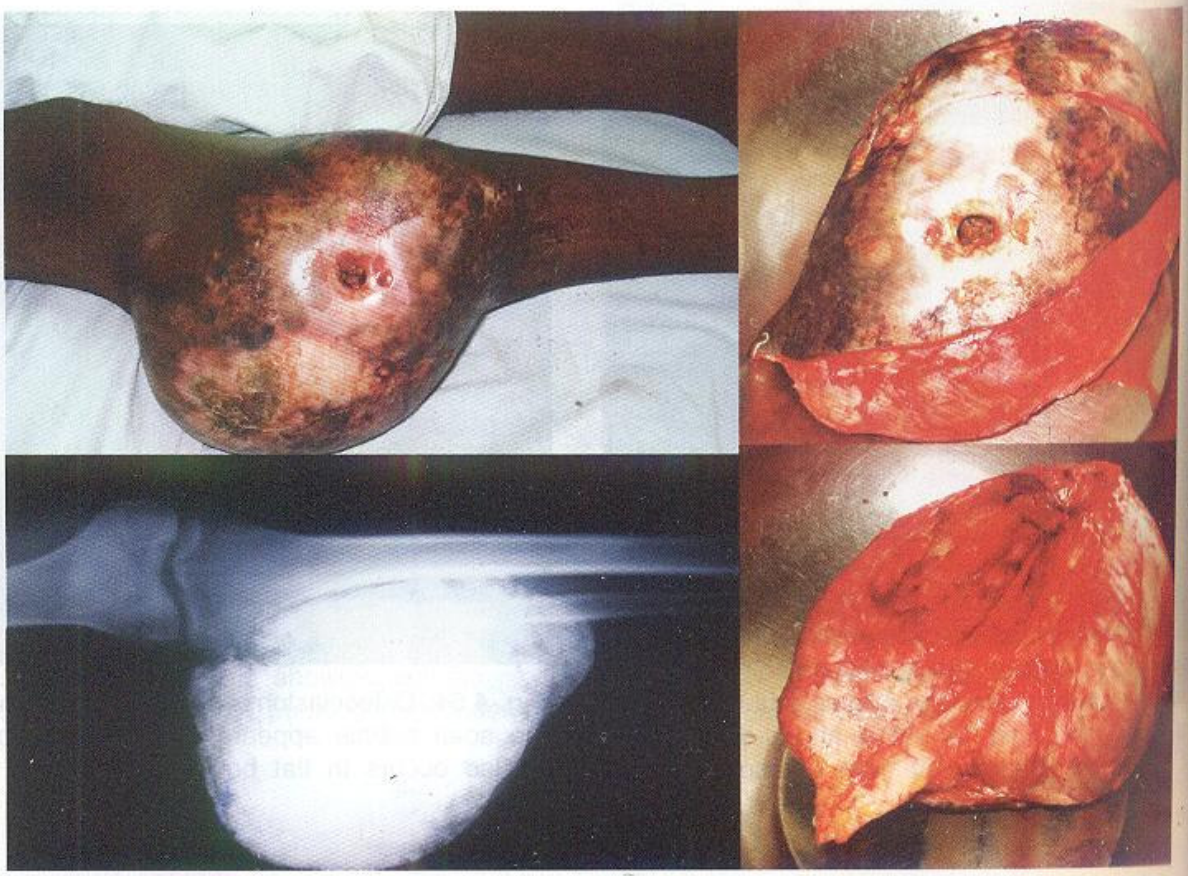
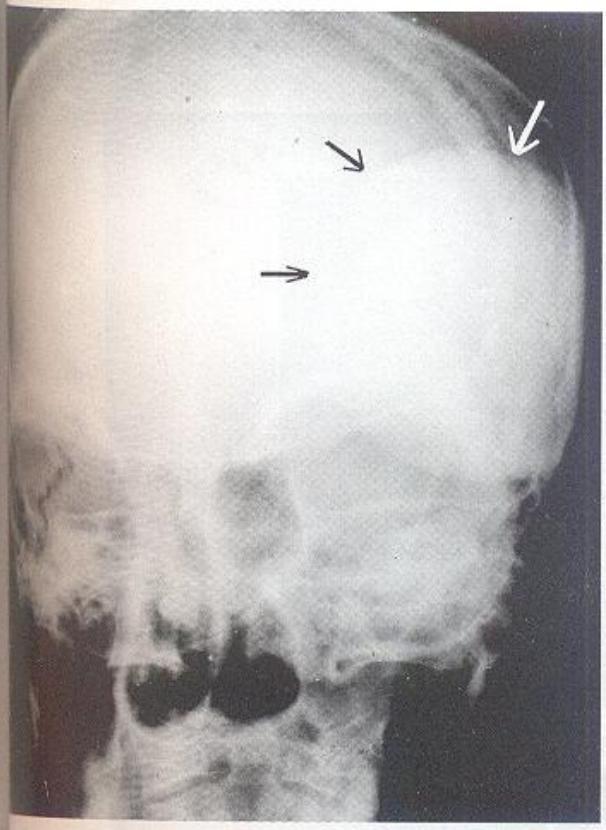


Fig. 4.56: X-ray upper ends of tibia and fibula showing chondrosarcoma arising from fibula. Confirmation is done by open biopsy. Treatment is wide excision with removal of the upper end of fibula. Amputation is not required in every patient and depends on the extent of the tumour.

4.57: X-ray showing sacrococcygeal teratoma in an infant.



4.58: Skull X-ray showing soft tissue shadow is radiopaque – could be meningioma or soft tissue ing.

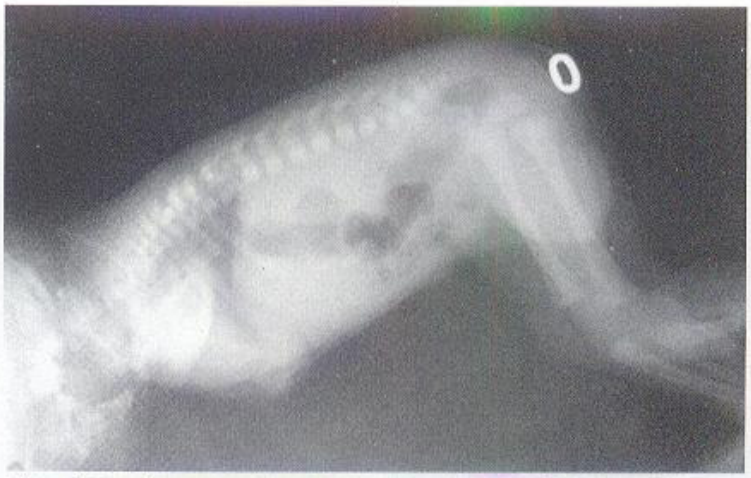


Fig. 4.59: Anorectal malformation (ARM). Blind anal dimple is marked with a radiopaque marker. X-ray is taken to find out the level of rectal pouch and distance is measured and assessed as whether it is above/below the pubococcygeal line. It is used to find out whether ARM is high or low.

Fig. 4.60: X-ray neck, lateral view showing thyroid swelling with calcification. Fine calcification signifies papillary carcinoma of thyroid. Ring calcification signifies multinodular goitre.

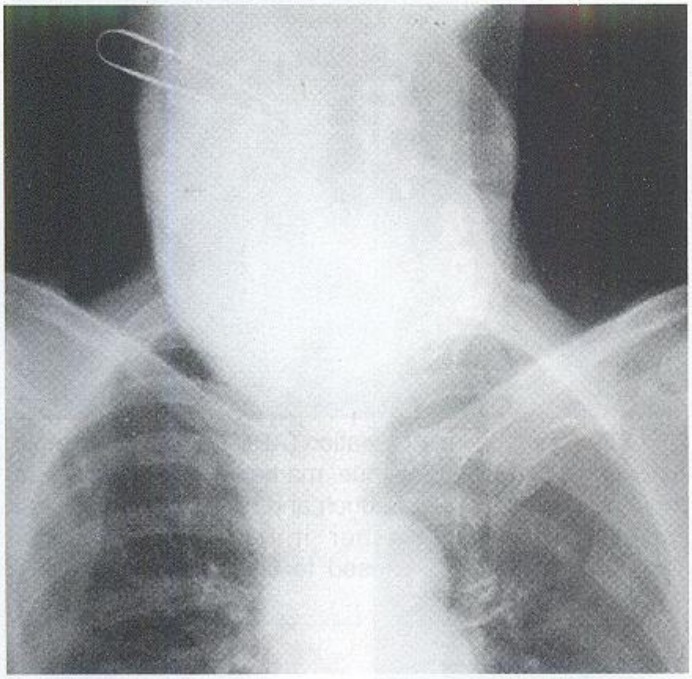


Fig. 4.61: X-ray neck showing thyroid enlargement due to multinodular goitre with ring calcification (coarse).

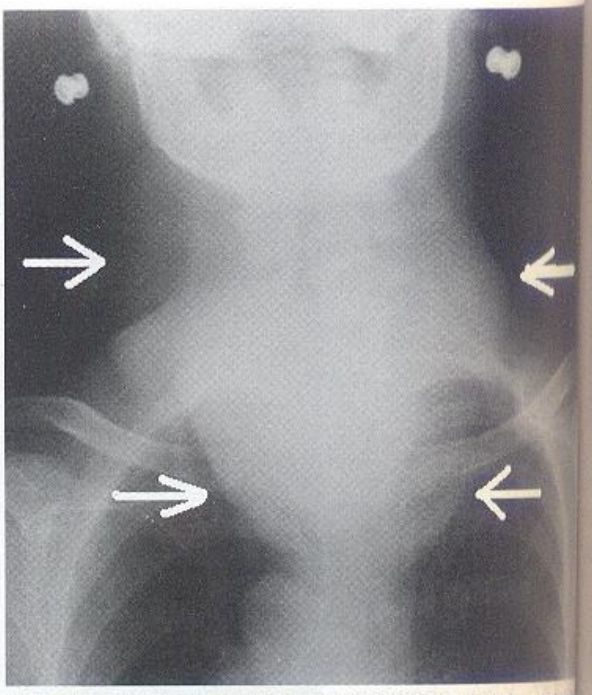


Fig. 4.62: X-ray showing retrosternal goitre – extens from neck. Percussion over the sternum will be d *Pemberton's sign* will be positive (by raising arms ab the shoulder will cause dilatation of veins over face chest wall with dyspnoea due to compression of S and trachea).

Fig. 4.63: X-ray showing large stone (radiopaque) in submandibular salivary gland. Stone formation is common in submandibular salivary gland; not in parotid gland. (Secretion from parotid is serous with less calcium and has dependent drainage; whereas secretion of submandibular salivary gland is mucus, contains more calcium; with nondependent drainage). Stone causes sialadenitis. It is commonly radio-opaque. It is treated by excision of the gland.