A fifty-year-old male labourer presented with complaints of diplopia, bulging of eyes, and pain in the left eye of eight months duration. He also had swelling of the fingers and eruption over shin of the same duration.

He also had a globular swelling in front of neck eight years back, which was painful and lasted for about three months. There was no other significant history, but he was a chronic smoker and smoked 1-2 bundles of beedis (Indian Cigarette) per day.

On physical examination and Hertel exophthalmometry there were signs of ophthalmopathy. The thyroid gland was not palpable, but he had clubbing of all fingers and toes (Figs.1a&b). No local tenderness was detectable around wrist or ankle joints. He also had dark violacious plaques on anterior leg, bilaterally with coarsening and furrowing of the intervening skin (Fig. 1c).

His systemic examination was normal, except for the presence of slow relaxation of deep tendon reflexes.

Routine hematological and biochemical tests including calcium and phosphorus were normal. Growth hormone, PTH, and his lipid profile were within normal range. Thyroid hormone profile showed FT3-2.44 pg/ml, TSH (Third generation) was 14uIU/ml. Anti-TPO antibodies were >1000 IU/ml, ANA and rheumatoid factor were negative. Old healed tubercular lesions were evident in the chest X-ray, high resolution and contrast enhanced CT scan of the thorax showed no diffuse parenchymal or a mass lesion. Hand radiographs showed tufting of the terminal phalanges in an arrow-head fashion with periosteal fluffy bone deposition at diaphyses of all the phalanges and metacarpals bilaterally, especially at the extensor aspect of both fifth metacarpals (Fig. 2). Bone scan showed increased uptake in distal end of left ulna, left capitate and hamate bone, and left fourth metacarpal. First metacarpal of right hand and distal phalanges of all fingers also showed increased uptake (Fig. 3). A diagnosis of Graves’ ophthalmopathy, acropachy and dermopathy with primary hypothyroidism was made and patient was started on L-thyroxin and prednisolone orally. He was also advised to quit smoking.

Thyroid acropachy is seen usually in patients who have thyroid dysfunction (hyperthyroidism or hypothyroidism), dermopathy and severe degree of ophthalmopathy.1,2

The pattern of bone changes in thyroid acropachy is characteristic and occurs at mid shaft of small tubular bones in an irregular and lacy manner with an adjacent soft tissue proliferation.1 In our patient similar irregular distribution was seen in both X-ray and bone scan; also there was no local tenderness as seen in hypertrophic osteoarthropy where the new bone is smoothly layered along the diaphyses.2 Pulmonary osteoarthropathy is important differential diagnosis in any patient who is smoker but in our patient no significant pulmonary pathology could be detectable. Thyroid acropachy usually does not involve proximal long bones and periarticular areas, which occurs in rheumatoid arthritis and metabolic disorders including hyperthyroidism.1

Interestingly, smoking aggravates the manifestations of Graves’ ophthalmopathy. Thyroid acropachy is rare but important cause of digital clubbing.

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