

Answer

The chest radiograph (Figure 1) shows grossly expanded anterior ends of the ribs. The limb radiographs (Figures 2 and 3) show cortical thinning and lacy trabeculation of the limb bones. The patient was diagnosed as having *Beta-thalassaemia major* by haemoglobin electrophoresis.

The radiologic bone changes are due to marrow hyperplasia and marrow space expansion, resulting from prolonged and excessive haematopoiesis. These changes lead to growth disturbances, modelling deformities, and premature closure of the growth plate. These changes are associated with a characteristic radiologic appearance of the skull, long bones, ribs and hands. Growth is stunted. Gross skeletal deformities can occur as in this case.

These changes are not usually seen in today's practice due to wide and easy availability of safe transfusion therapy. An inadequately transfused child develops these typical radiological features.