Prosthetic Rehabilitation of Oligodontia associated with Osteopetrosis – an album

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Osteopetrosis is a bone disease that makes bones abnormally dense and prone to fracture. Different types of osteopetrosis are distinguished by their pattern of inheritance viz. autosomal dominant, autosomal recessive, or X-linked. Dense bones are accidentally discovered when an x-ray is taken for another reason. The major features of the condition include multiple bone fractures, scoliosis of the spine, arthritis in the hips, and osteomy-

Fig 1.Thirteen year old girl with oligo dontia associated with osteopetrosis

Fig 2.Ostepetrosis diagnosed at an early age and suffering from facial palsy

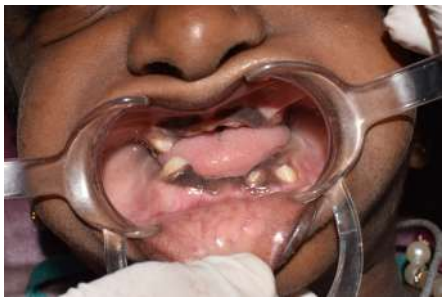

Fig 3.Absence of multiple teeth

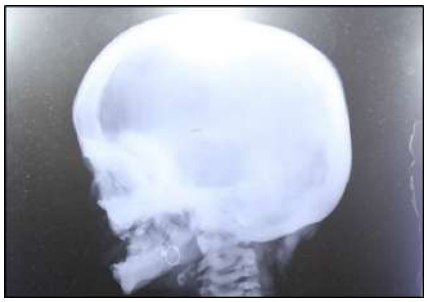

Fig 4.History of hydrocephalous shunt surgery

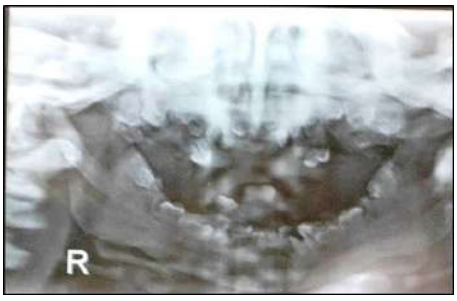

Fig 5.Multiple unerrupted teeth seen in the OPG

Fig 6.Maxillary study cast

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elitis. These problems usually become apparent in late childhood or adolescence. Mutations in at least nine genes cause the various types of osteopetrosis. Mutations in the CLCN7 gene are responsible for about 75 percent of cases of autosomal dominant osteopetrosis, 10 to 15 percent of cases of autosomal recessive osteopetrosis, and all known cases of intermediate autosomal osteopetrosis. Besides medical problems, oral complications such as oligodontia, growth retardation, narrow upper arch, crowding, dental caries, and abnormal tooth development are observed.

The development of the dentition is invariably affected, with the dental malformation being roughly proportional to the severity of the bone disease. Experimental animal studies suggest a thyroid-parathyroid hormone dysfunction, but experimental findings are not supported by clinical findings in human beings. The dental changes are probably the result of local en-

Fig 7. Mandibular study cast

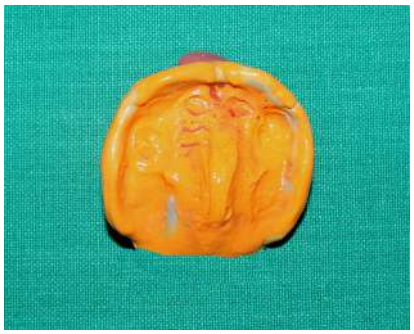

Fig 8. Maxillary secondary impression with putty border moulding and lightbody lining

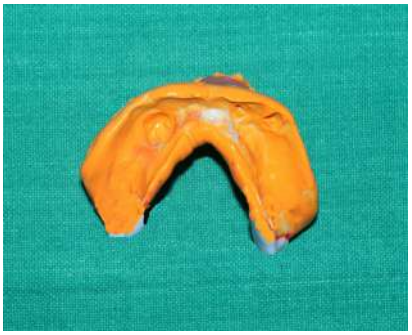

Fig 9. Mandibular impression with putty border moulding and light body lining

Fig 10. Face bow transfer.Fork was customised to match with the spring bow

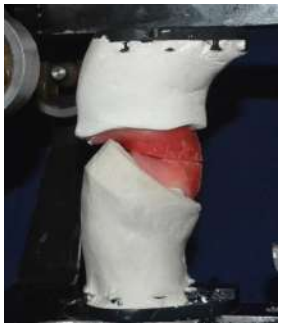

Fig 11. Jaw relation

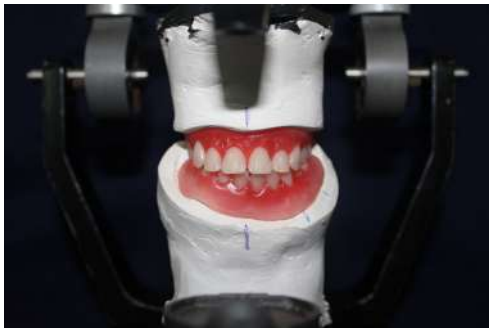

Fig 12. Trial denture made on permanent base

Fig 13. Profile view of the trial denture

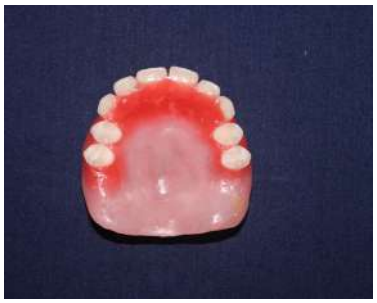

Fig 14. Maxillary trial denture with short dental arch.

Fig 15. Profile view of the maxillary trial denture.

vironmental factors affecting the nutritional and space requirements of developing tooth germs. The results of determinations of calcium and phosphorus in osteopetrotic enamel and dentin suggest altered mineral metabolism in these tissues. Analysis of amino acids in affected dentin showed significant deviation from normal concentrations of histidine, hydroxylysine, proline and glycine. A case is reported and different stages of rehabilitation are presented in the album.

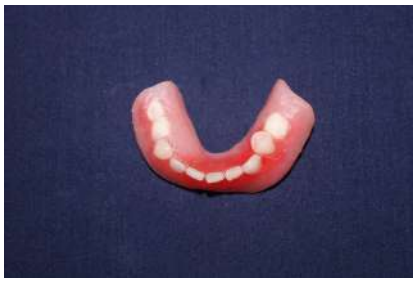

Fig 16.Mandibular trial denture with short dental arch

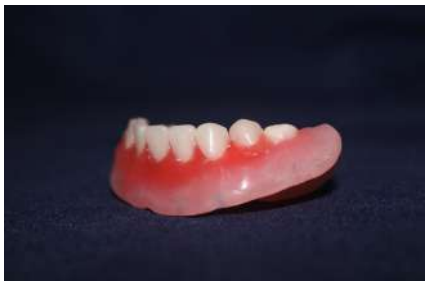

Fig 17.Profile view of mandibular trial denture

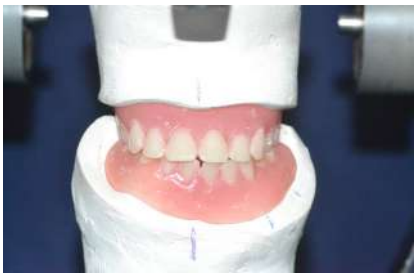

Fig 18.Processed denture on lab remounting

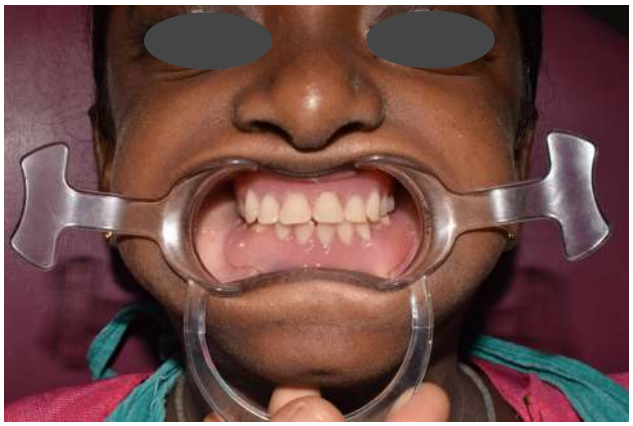

Fig 19.Processed denture tried in the patient

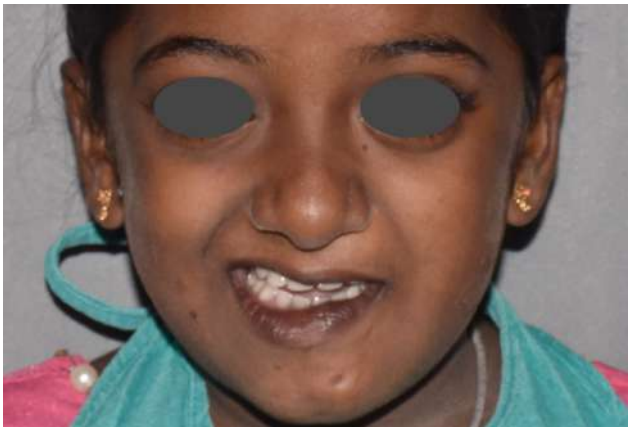

Fig 20.Restored smile.