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Clinical Image

Endosulfan: Saga Continues.....

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A 4 year old medically compromised female patient visited the dental outpatient department for routine dental check. Family history, past medical and personal history was non-contributory. Dental history revealed that the patient had undergone treatment for cleft lip one year back. Extraoral Examination revealed brachiocephalic skull, Slight facial asymmetry, prominent forehead with flattened nose, incompetent lips, hypoplastic maxilla and prognathic mandible with ectrodactyly of hands and normal appearance of feet (Figure 1A,B,C and D). Intraoral examination revealed restricted mouth opening, unsatisfactory oral hygiene status, mild arch discontinuity seen between 51 and 52 (Figure 1B). Other findings include delayed speech with obligatory mouth breathing. Orthodontic treatment was advised.

Endosulphan a chlorinated hydrocarbon insecticide of cyclodiene subgroup acts as a contact poison in a wide variety of insects and mites and is used primarily on food crops like tea, fruits and vegetables. It is permitted to be used as spray from helicopter at 2-3 meters height from crop canopy. Environmental impact of endosulphan is that if endosulphan is released into water, it is ex absorbed as the sediment and may bio concentrate in aquatic organisms. Exposure to endosulphan sulphate will result from the ingestion of contaminated food. Endosulfan in human body is rapidly degraded and eliminated with very little absorption in gastrointestinal tract [1]. Endosulphan is a very fatal poison that produces CNS stimulation and status epilepticus. CNS hyper- stimulation (with little or no peripheral component) is the predominant toxicological effect of endosulphan mediated by inhibition of Calmodulin– dependent Ca and Mg– ATPase and antagonism of chloride ion transport in gamma- aminobutyric acid receptor complex which release the synaptic inhibition on neurons. Life threatening status epilepticus and hemodynamic instability may occur. Endosulfan poisoning is a devastating catastrophe with very high mortality. To prevent endosulfan poisoning, the usage of it should be restricted and even prohibited all over India [2,3].

Figure 1:

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