Oral Submucous Fibrosis in Paediatric Age Group

R.K. Mundra, Assistant Professor, **S.K. Gupta**, Professor and H.O.D
Y. Gupta, Resident, Department. of E.N.T., M.G.M. Medical College
M.Y. Hospital, Indore (M.P.)

Abstract

Oral submucous fibrosis is common in the Indian subcontinent, but only a few cases have been reported in the paediatric age group. An interesting case of submucous fibrosis in a child aged 8 years is reported . A brief review of literature and management of the patient are discussed.

Occurrence of oral submucous fibrosis is limited to our subcontinent mainly on account of the habit of chewing betel-nut in various forms. The majority of cases occurs between the ages of 20 and 40 years and it is uncommon in the paediatric age group. We are reporting a case of oral submucous fibrosis in a 6-year-old girl to highlight the strong association of arecanut chewing as the potential factor in the etiology of this condition and potential danger of involvement of the paediatric age group with this disease from 'Pouch Culture' with both parents away at work . A ban on betel nut and tobacco is essential for the prevention of this disease.

Oral submucous fibrosis is a well-known clinical entity known since the time of Sushruta as 'Vidari' (Mukherjee A.L. et al). In the modern literature the condition was first reported by Schwartz in 1952. Joshi in 1953 was first person to describe this entity in India.

This disease is predominantly found in the Indian subcontinent. As per reported surveys of this disease the highest incidence found in the State of Kerala, with an overall prevalence rate of 2.5% in various States of the country (Gupta S.C. et al 1978)

Case Report

Priya, an 8 year old girl was referred from the Paediatric Ward to the E.N.T. Department of M.Y. Hospital with the complaints of fever with chills and rigors since the preceding six days and inability to open the mouth completely since five days.

H/o Frequent Betel nut chewing (Babu supari) since 6 months was elicited both parents were working as labourers so the child used to be alone at home.

Clinical examination revealed a thin-built girl of normal general condition. Oral cavity examination revealed a moderate degree of trismus (2cm. mouth opening) with blanched mucosa over the soft palate, anterior fancial pillars and cheek. Fibrotic white bands were seen involving the soft palate and anterior pillars with contracted uvula (Fig. 1). On palpation there was

Fig. 1. Submucous fibrosis involving soft palate, anterior fancial pillars, & uvula.

loss of the normal resilience and pliability of the involved tissues. Bilateral submandibular lymph nodes were palpable, mobile and non-tender. Rest of the ENT examination revealed no further abnormality.

Routine blood and urine investigations were within normal limits. The Erythrocyte sedimentation rate was slightly raised. (40 mm at end of 1st hour) Radiological investigations of the chest, P-A view, and X-Ray of the temporomandibular joint were within normal limits.

A deep wedge biopsy was taken under local anaesthesia from the soft palate. The biopsy report (1644/98) revealed intact squamous epithelium with focal aggregates of chronic inflammatory cell infiltration. The child under went a conservative line of treatment.

Discussion

Oral submucous fibrosis (OSMF) is chronic disease of insidious onset and unknown etiology affecting any part of the oral cavity and pharynx, but most frequently the soft palate and cheek.

It receives its nomenclature from the clinical picture of its well developed state of deposition of dense fibrous tissue in the submucous layer of the palate and cheek. Other terminologies for the disease are Atrophia idiopathica, Tropica Mucosa Oris (Schwartz 1952); Idiopathic palatal fibrosis, idiopathic scleroderma of mouth.

OSMF is well known clinical entity, known since the time of Sushruta as 'Vidari' (Mukherjee A.L. et al). In the modern literature, the condition was first reported by Schwartz 1952 Joshi in 1953 was first person to describe this entity in India. The disease is predominantly found in the Indian subcontinent. As per reported surveys of this disease, the highest incidence has been found in the State of Kerala with prevalence rate of 0.2-0.5% in various states of country. (Gupta S.C. et al, 1978). Sex ratio vary, but majority demonstrate female predominance. (Rao 1962; Pindborg et al, 1968)

Majority of cases occur between the ages of 20-40 years Mehta et al, 1971) but, study by Sirsat and Khanolkar in 1962 revealed 04 cases of oral submucous fibrosis in age group of 1-10 years. Anil S, Beena V.T (1993) reported a case of Oral Submucous Fibrosis in a 12 year old girl.

Many studies have been undertaken from time to time in various institutions to define the etiology of the disease. Earlier studies by Sirsat et al (1962); Pindborg et al (1968) established the role to local irritants like tobacco, smoking, pan, betel nut chewing, chillies, (Hammer et al, 1974) MISI powder. (Gupta S.C, 1978). The possible role of streptococcal infection and vitamin deficiency have also been incriminated. It has been postulated by many authors to be a localized collagen disorder (Su, 1954). The most widely accepted theory of etiopathogenesis of oral submucous fibrosis is that of an autoimmune response, antigen-antibody reaction. Mackey & Burnet, 1963; Phatak & Gosavi, 1975)

Oral submucous fibrosis is characterized by a burning sensation in the mouth, particularly while eating spicy food, followed by vesicle formation, ulceration and recurrent stomatitis, salivation disorders and defective gustatory sensation. This is followed by a stage of fibrosis in which fibrous tissue deposition occurs in the oral submucosal layer culminating in disabling effects like inability to open the mouth and protrude the tongue. It is considered to be a precancerous condition Paymaster, 1965; Pindborg, 1965 Dockrat, 1968).

The basic change in oral submucous fibrosis is a fibro-elastic transformation of connective tissue in the lamina propria with epithelial atrophy, sometimes preceded by vesicle formation. In its later stages the mucous membrane becomes stiff and the patient suffers from trismus. (Pindborg & Sirasat, 1966).

As it is a disease of unknown etiology, till date, no satisfactory treatment has been described in literature for oral submucous fibrosis. The various modalities of treatment employed at present are :-

- To refrain from irritants like "Pan Masala" betel-nut.
- Supportive treatment Vitamins, minerals.
- Local injections of (a) Corticosteroids which acts as immuno suppressive agents. (Goodman and Gilaman, 1975; Golhar S. et al, 1988)
 - (b) Placentrex (Ramanjaneyulu P et al, 1980)
 - (c) Collagenase (Kumar K et al, 1980)
 - (d) Hyalase (Kackar P.K. 1985)
- Microwave diathermy.
- Excision of fibrous bands followed by myomucous flaps to cover the raw area.

Thus, keeping in mind the shortcomings of currently available modalities need for prevention of disease and reorientation towards the treatment aspect has to be emphasized.

Conclusion

- There is the potential danger an ever-increasing Involvement of the paediatric age group with oral submucous fibrosis result in form the easy and cheap availability of pouch of betel-nut, "pan bahar" and tobacco.

Our association should make concerted effort to demand that the government should impose an immediate ban on the manufacturing of all forms of "paan" and tobacco advertisements.

Despite a huge amount of work done to establish the etiopathogenesis and treatment. The disease still remains a mystery in all its aspects. The disease, though not-fatal, is one of a crippling disorder of trismus which leads to poor nutrition and poor hygiene.

References

1. Anil S, Beena VT (1993) : Oral submucous fibrosis in a 12-year old girl case report. *Pediatr Dent* 15 : 2, 120-122.
2. Golhar S, Mahore M.N. & Narkhede S (1989) : Tongue flap in oral submucous fibrosis. *Indian Journal of Otolaryngology*. 41 : 3, 103-107.
3. Gupta S.C., Yadav Y.C (1978) : "MISI" an etilogic factor in oral submucous fibrosis. *Indian Journal of Otolaryngology*. 30 : 1, 5-6.
4. Kackar P.K, Puri R.K. & Venkatachalam V.P. (1985) : Oral submucous fibrosis-Treatment with hylase. *The Journal of Laryngology and Otolgy*. 99 : 57-59.
5. Mukherjee A.L, Biswas S.K. (1972) : Oral submucous fibrosis - A search for aetiology. *Indian Journal of Otolaryngology*. 24 : 1, 11-15.
6. Phatak A.G. (1978) : Serum proteins and immunoglobulins in oral submucous fibrosis. *Indian Journal of Otolaryngology*. 30 : 1, 1-4.
7. Rao A.B.N (1902) : Idiopathic Palatal Fibrosis. *British Journal of Surgery*. 50 : 23 - 25.