

# CLINICAL CASES

Dent. Med. Probl. 2013, 50, 1, 85–87  
ISSN 1644-387X

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## Oral Submucous Fibrosis in a 10 Year Old Girl – Case Report

### Zwłóknienie podśluzówkowe jamy ustnej u 10-letniej dziewczynki – opis przypadku

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A – concept; B – data collection; C – statistics; D – data interpretation; E – writing/editing the text;  
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#### Abstract

The authors report a case of a 10 year old girl who presented with a complaint of reduced mouth opening and a burning sensation. On examination, she was clinically diagnosed with oral submucous fibrosis (OSMF). The patient was supplemented with oral vitamin A, zinc acetate syrup along with oral iron supplements and was followed up for 2 months. Following treatment the patient reported increased mouth opening and a reduced burning sensation proving the treatments success (**Dent. Med. Probl. 2013, 50, 1, 85–87**).

**Key words:** oral submucous fibrosis, diagnosis, treatment.

#### Streszczenie

Opisano przypadek 10-letniej dziewczynki, która zgłosiła się z powodu ograniczonego otwierania ust i pieczenia w jamie ustnej. Na podstawie badania postawiono rozpoznanie kliniczne – włóknienie podśluzówkowe jamy ustnej (OSF). W leczeniu zastosowano doustną suplementację witaminy A z octanem cynku i doustne podawanie żelaza przez 2 miesiące. W następstwie leczenia pacjentka zauważyła zwiększenie zakresu otwierania ust i zmniejszenie pieczenia, co uznano za sukces terapeutyczny (**Dent. Med. Probl. 2013, 50, 1, 85–87**).

**Słowa kluczowe:** zwłóknienie podśluzówkowe jamy ustnej, rozpoznanie, leczenie.

Oral submucous fibrosis is a chronic disease affecting any part of the oral cavity which may extend to the pharynx or the oesophagus. It is associated with juxta-epithelial inflammation followed by fibro-elastic change of the lamina propria with atrophy leading to loss of elasticity of the oral mucosa. OSMF is seen most frequently in the Indian sub-continent and has a reported incidence of between 0.2–1.2% of the urban population.

The present report describes a case of OSMF presenting in a 10 year old girl [1, 2].

## Case Report

A 10 year old girl reported with difficulty in opening mouth and burning sensation on consuming spicy food for the last 1 month. She was reportedly chewing tobacco three to four times a day since the last 3 years. The girl's mother and grandmother themselves consumed chewable tobacco habitually and used to offer it to the girl when she would be with them. On physical examination a reduced mouth opening of 0.9 cm (Fig. 1),



**Fig. 1.** Patient on first dental visit

**Ryc. 1.** Pacjentka na pierwszej wizycie stomatologicznej



**Fig. 2.** Three weeks after starting treatment mouth opening increased to 2.2cm

**Ryc. 2.** 3 tygodnie po rozpoczęciu leczenia stwierdzono zwiększenie zakresu otwierania ust do 2,2 cm

and blanched oral mucosa involving the soft palate and the anterior faucial pillars were observed. On palpation it was observed that there was loss of the normal resilience of mucosa with dense vertical fibrotic bands in the buccal mucosa bilaterally. Routine blood investigations were normal except Haemoglobin which was 7.7 gm%. Based on the clinical findings the diagnosis of Oral Submucous Fibrosis was made. The patient was prescribed oral vitamin A preparations, and zinc acetate syrup (10 ml/day) in divided doses along with oral iron supplements after motivating the patient and her family to completely quit the habit. Physiotherapy in the form of aggressive mouth-opening exercises were advised along with regular check-up. Three weeks from the starting of the treatment relief from the burning sensation in the oral cavity was reported with mouth opening also improving to 2.2 cm (Fig. 2). The patient did not report back for further follow up as her family shifted to other city but as per telephonic conversation with her new dentist it was observed that the mouth opening had improved to 2.6 cm within 2 months of starting the treatment.

## Discussion

Oral submucous fibrosis is a chronic disorder characterized by fibrosis of the mucosa of the

oral cavity, oropharynx and frequently the upper third of the oesophagus [3]. The disease is most commonly seen in the Indian sub-continent. Etiological factors include areca nut chewing, nutritional deficiencies and genetic predisposition [4, 5]. Except in early forms of the disease the clinical presentation is characteristic due to fibrosis of lamina propria and mucosa with a loss of tissue mobility. The majority of patients present to the dental surgeon with the chief complaint of burning sensation on consuming spicy food and loss of elasticity of lip, tongue, and palate leading to varying degrees of reduced mouth opening and sometimes restriction of tongue movement [5, 6]. A 3-month regimen of vitamin A and zinc acetate was prescribed along with strict instructions to quit the habit [8–10]. Zinc was prescribed as it is primarily an important component of a large number of enzymes that synthesize carbohydrates, lipids, proteins while vitamin A is essential for the normal functioning of the immune functions [7–10]. Reduction of burning sensation and an increase in mouth opening were observed within 15 days.

Oral submucous fibrosis is rarely seen in children. In this case conservative treatment constituting of oral vitamin A, and zinc acetate syrup along with oral iron supplement had a good result.

## References

- [1] JAYANTHI V., PROBERT C.S.J., SHER K.S., MAYBERRY J.F.: Oral Submucous Fibrosis: a preventable disease. *Gut* 1992, 33, 4–6.
- [2] SHAH B., LEWIS M.A.O., BEDI R.: Oral submucous fibrosis in a 11-year-old Bangladeshi girl living in the United Kingdom. *Br. Dent. J.* 2001, 191, 130–132.
- [3] RAJENDRAN R.: Oral submucous fibrosis – etiology, pathogenesis and future research. *Bull. World Health Organ.* 1994, 72, 985–996.
- [4] COX S.C., WALKER D.M.: Oral submucous fibrosis. A review. *Austr. Dent. J.* 1996, 41(5), 294–299.
- [5] KIRAN KUMAR K., SARASWATHI T.R., RANGANATHAN K., UMA DEVI M., ELIZABETH J.: Oral submucous fibrosis: a clinico-histopathological study in Chennai. *Indian J. Dent. Res.* 2007, 18(3), 108–111.

- [6] KARTHIK H., NAIR P., GHAROTE H.P., AGARWAL K., RAMAMURTHY BHAT G., KALYANPUR RAJARAM D.: Role of Hemoglobin and Serum Iron in Oral Submucous Fibrosis: A Clinical Study. *Sci. World J.* 2012, 2012, 254013.
- [7] KUMAR A., SHARMA S.C., SHARMA P.: Beneficial effect of oral zinc in the treatment of oral submucous fibrosis. *Indian J. Pharmacol.* 1991, 23, 236.
- [8] HARRIS E.D.: Zinc and copper: Evidence for interdependence, not antagonism. *Nutrition* 2001, 17, 734–742.
- [9] JIANG X., HU J.: Drug treatment of oral submucous fibrosis: A review of the literature. *J. Oral Maxillofac. Surg.* 2009, 67, 1510–1515.
- [10] DHARIWAL R., RAY J.G., PATTANAYAK S.M., SWAIN N.: Oral submucous fibrosis: A report of two pediatric cases and a brief review. *J. Indian Soc. Pedodontics Prev. Dent.* 2012, 30, 85–88.

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Received: 2.01.2013  
Revised: 25.01.2013  
Accepted: 28.01.2013

Praca wpłynęła do Redakcji: 2.01.2013 r.  
Po recenzji: 25.01.2013 r.  
Zaakceptowano do druku: 28.01.2013 r.