



Letter to the editor

Revisiting and revising the definition of oral submucous fibrosis



Dear Editor,

Our research group, which has been focusing on understanding the molecular pathogenesis of oral submucous fibrosis (OSF) came across this letter to the editor in Oral Oncology where the authors have attempted to redefine OSF [1]. In the modified definition, it reads as “an insidious chronic, **potentially malignant disorder** affecting any part of oral cavity and sometimes the pharynx. Although occasionally preceded by and/or associated with vesicle formation, it is always associated with juxtaepithelial inflammatory reaction followed by a fibroelastic change of lamina propria with epithelial atrophy leading to stiffness of the oral mucosa, **progressively limiting mouth opening** and causing inability to eat” [1]. The updated definition of OSF takes precedence from the fact that the condition is potentially malignant and seemingly progressive in nature. While the authors welcome their efforts at redefining this condition, we believe that the inclusion of relevant clinicopathological characteristics envisages the development and progression of this condition.

The proposed definition gives the impression that the disease is restricted to pharynx, although the condition has been shown to involve oesophagus, as early as in 1991 by Maher et al. [2], and more recently by several investigators [3–5]. Curiously enough, the omission of oesophagus being involved in OSF necessitates some explanation from the authors.

The oesophageal changes in OSF manifests itself as dysphagia that can potentially progress to develop into an oesophageal cancer [5,6]. The condition, which is prevalent in both the western and eastern populations seemingly, has a poorer prognosis [7–9]. Oesophageal squamous cell carcinoma and oesophageal adenocarcinoma are two of its histological subtypes [10]. The former develops from the use of betel quid (BQ), alcohol, cigarette, and hot beverages, whereas the latter results from chronic irritation due to gastric acid [10]. Oesophageal cancer in non-smoking patients is particularly observed in BQ + tobacco (T) chewing individuals [5]. Hence, BQ + T chewing could be the cause of oesophageal cancer in eastern countries [5,6]. With increased migration and spread of habits, this could have bearing among subjects in the western countries in the near future. The proclivity of oesophagus to be affected by OSF and its impending malignant transformation necessarily justifies its inclusion in the definition of OSF.

In the light of aforementioned facts, Pindborg and Sirsat's (1966) definition of OSF could be modified as “**an insidious, chronic potentially malignant fibrotic disorder affecting the entire oral cavity and sometimes the pharynx and oesophagus. Although occasionally preceded by and/or associated with vesicle formation, it is always associated with a juxta-epithelial inflammatory reaction followed by a**

fibroelastic change of the lamina propria with epithelial atrophy leading to stiffness of the oral mucosa, progressive decrement in mouth opening and inability to eat”.

We regard this as a comprehensive definition of OSF because it incorporates all the affected sites, the malignant potentiality as well as its progressive nature. This definition addresses esophageal submucous fibrosis and esophageal cancer as a component of the condition, which is not taken into account in literature.

Conflict of interest statement

All the authors of the manuscript hereby state that there is no financial implication or personal relationship with other people or organization that could inappropriately influence the outcome of this work.

References

- [1] Prasad RS, Pai A. Oral submucous fibrosis – Is it time to modify the definition? *Oral Oncol* 2018;87:203.
- [2] Maher R, Ahmed W, Qureshi H, Zuberi SJ, Syed S. Oesophageal changes in oral submucous fibrosis using fibreoptic endoscopy—a pilot study. *J Pak Med Assoc* 1991;41:312–3.
- [3] Shilpa BJ, Ashok L, Veerendra Swamy SM. Esophageal changes in oral submucous fibrosis using fiber-optic endoscopy. *J Investig Clin Dent* 2011;2:10–5.
- [4] Misra SP, Misra V, Dwivedi M, Gupta SC. Oesophageal subepithelial fibrosis: an extension of oral submucosal fibrosis. *Postgrad Med J* 1998;74:733–6.
- [5] Wollina U, Verma SB, Ali FM, Patil K. Oral submucous fibrosis: an update. *Clin Cosmet Investig Dermatol* 2015;8:193–204.
- [6] Jain V, Garg A, Parascandola M, Chaturvedi P, Khariwala SS, Stepanov I. Analysis of alkaloids in areca nut-containing products by liquid chromatography-tandem mass spectrometry. *J Agric Food Chem* 2017;65:1977–83.
- [7] Short MW, Burgers KG, Fry VT. Esophageal cancer. *Am Fam Physician* 2017;95:22–8.
- [8] Domper Arnal MJ, Ferrandez Arenas A, Lanás Arbeloa A. Esophageal cancer: risk factors, screening and endoscopic treatment in Western and Eastern countries. *World J Gastroenterol* 2015;21:7933–43.
- [9] Polee MB, Hop WC, Kok TC, Eskens FA, van der Burg ME, Splinter TA, et al. Prognostic factors for survival in patients with advanced oesophageal cancer treated with cisplatin-based combination chemotherapy. *Br J Cancer* 2003;89:2045–50.
- [10] Chung CS, Lee YC, Wu MS. Prevention strategies for esophageal cancer: perspectives of the East vs West. *Best Pract Res Clin Gastroenterol* 2015;29:869–83.

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