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## Ultrasonic evaluation and assessment of thickness of masseter muscle in oral submucous fibrosis

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**Introduction:** Oral submucous fibrosis (OSMF), a potentially malignant disorder is associated with prolonged chewing of areca nut which results in fibrosis of the lamina propria. A positive correlation has been observed between masseter thickness and clinical progression of oral submucous fibrosis in previous studies. The increased thickness of the masseter may, in turn, alter the echogenic pattern of the muscle. Hence, the aim of the present study was to assess the thickness and echogenicity of the masseter muscle in subjects with oral submucous fibrosis.

**Materials & Methods:** 15 subjects with oral submucous fibrosis, 15 subjects with the history of chewing areca nut without oral submucous fibrosis and 30 controls were included in the study. The thickness and the internal echogenic pattern of the masseter were evaluated in all the subjects. The echogenic pattern was classified as types I, II and III. The data obtained were tabulated and subjected to statistical analysis.

**Results:** The mean thickness of masseter was highest in the Oral submucous fibrosis group followed by chewers and controls, although the difference was not statistically significant. Type II was the most common echogenic pattern observed in all the study groups, followed by Type I (the difference was not significant). None of the groups presented with type III.

**Conclusion:** The masseter thickness may be used as an additional diagnostic criterion in OSMF. Studies with a larger sample and use of a high-resolution ultrasound machine may give a better understanding of the echogenic pattern of masseter in Oral submucous fibrosis. Ultrasonography was found to be a reliable and a reproducible method for evaluating the masseter muscle.

### Biography

Akhilanand Chaurasia is working as an Associate Professor and Consultant at King George Medical University, India. He has remarkable credit of contributing to academics for publishing 49 research papers, peer reviewer of more than 150 international journals with high impact factors and member of several international organization related to field of Oral Medicine, Oral biology and community health. He is a fellow of Pierre Fauchard Academy (PFA, USA), fellow of International College of Continuing Dental Education (FICCDE, Singapore), Fellow of International College of dentists (FICD, USA), Fellow of Academy of General Education (FAGE), Fellow of International academy of Medical sciences (FIMSA) and International Travel Fellow from Indian Council of Medical Research. He is a member of editorial board of 14 international journals, Editor in Chief of two national journals, Editor of nine international journals and Associate Editor of one international journal. He has completed seven intramural projects. Currently, he is perusing his PhD in Chronobiology of Head and Neck Cancer.

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