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EVALUATION OF IRON DEFICIENCY IN PATIENTS OF ORAL SUBMUCOUS FIBROSIS

Dentistry

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ABSTRACT

Background: Oral submucous fibrosis is a chronic, insidious oral mucosal condition affecting the most parts of the oral cavity with high malignant transformation rate triggered by areca nut chewing, nutritional deficiencies, immunologic processes and genetic predisposition. It causes Significant hematological abnormalities resulting in anemia and a decrease in serum iron levels. **Aims and Objectives:** The aim of this study was to estimate the hemoglobin and serum iron levels among patients with oral submucous fibrosis and to compare the values with healthy subjects and with patients of iron deficiency anemia. **Materials and Methods:** In this hospital-based study 50 diagnosed patients of oral submucous fibrosis, 25 healthy individuals and 25 patients with iron deficiency anemia were included and the values of hemoglobin and serum iron levels were estimated using Sahli's and Ferrene methods. **Results:** Oral submucous fibrosis patients showed significantly lower levels of hemoglobin and serum iron when compared with the healthy subjects and serum iron level was significantly lower when compared with anemia patients. **Conclusion:** The findings of the study emphasizes on the assessment of hemoglobin and serum iron for patients with oral submucous fibrosis. Also iron therapy should be instituted concomitantly with the initial diagnosis which helps to cease the further progression of the condition. Further extensive studies are indicated to understand the significance of iron deficiency and its relation with submucous fibrosis,

KEYWORDS

INTRODUCTION

It is a chronic progressive disorder, and its clinical presentation depends on the stage of the disease at detection. The majority of patients present with an intolerance to spicy food and rigidity of lip, tongue,and palate leading to varying degrees of limitation of openingof the mouth and tongue movement. Iron is essential for the overall integrity and health of epithelia of digestive tract and its contribution to normal enzymatic functions. OSMF is also considered as an Asian version of sideropenic dysphagia, wherein chronic iron deficiency leads to mucosal susceptibiity to irritants, such as chilies and areca nut product. Deficiency of iron, Vitamin B-12, and folate canaffect the integrity of the oral mucosa. Significant hematolog-ical abnormalities have been reported in OSMF, including an increased blood sedimentation rate, and a decrease in serum iron and an increase in total iron binding capacity

MATERIAL AND METHODS

The study population were selected from patients presenting for routine dental treatment with signs and symptoms of OSMF. Age- and gender-matched healthy controls were selected from patients who are free from systemic diseases and reporting for routine hematological investigations. Written informed consent was taken from all the study participants.. Oral mucosal lesions other than OSMF observed clinically; previously treated cases of OSMF; patients with oral mucosal lesions, systemic disorders such as diabetes, hypertension and liver/kidney disorders and/or those under treatment for any other systemic diseases were excluded from the study. The fasting blood sample was collected. Approximately 5 mL of venous blood was obtained by venipuncture of the median cubital vein after taking all aseptic precautions.

Estimation of iron was done using Ferrene's method. The red cell indices (RCIs) and Hb level were analyzed by the automated cell counter method.

Statistical Analysis

The mean values and standard deviations were calculated by Chi-square test.

RESULTS

There was a statistically significant difference in serum iron and haemoglobin level in all two groups ($p<0.05$). The serum iron level was lowest in OSMF group and haemoglobin was lowest in iron deficiency anaemia group. A progressive decrease in serum iron and haemoglobin levels from Stage I of OSMF to the Stage IV of OSMF was also observed.

DISCUSSION

Oral submucous fibrosis is a chronic, insidious oral mucosal condition which occurs predominantly in younger individuals of Asia and India. In India alone, around 5 million people are suffering from OSMF. The incidence rate of OSMF is increasing in India due to the high demand of areca nut in the form of pan masala and increase in the uptake of this habit by young people due to easy access and good market strategies. Although iron deficiency anemia and OSMF are two different conditions, the clinical picture of OSMF depicts that of iron deficiency anemia with signs and symptoms such as blanching, burning sensation, and difficulty in swallowing.

CONCLUSION

This article provides the pieces of evidence from the studies conducted by various authors establishing the relationship between iron deficiency anemia and OSMF. According to the studies mentioned above, the biochemical assessment of oral precancerous conditions such as OSMF may help in its early diagnosis and prognosis. Further, iron therapy should be administered consecutively along with a properly balanced diet along with other treatment modalities.

REFERENCES

1. Sabharwal R, Gupta S, Kapoor K, Puri A, Rajpal K, Sabharwal R. Oral submucous fibrosis: A review. J Adv Med Dent Scie Res 2013;1(1):29-37.
2. GhomAG, Shubhangi M. Premalignant Lesions and Conditions. Textbook of Oral and Maxillofacial Pathology, 2nd edition. New Delhi: Jaypee Brothers Medical Publishers (P) Ltd; 2013. pp. 243-248.
3. IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. Betel-quid and areca-nut chewing and some areca-nut derived nitrosamines. IARC Monogr Eval Carcinog Risks Hum 2004;85:123-129.
4. Cox SC, Walker DM. Oral submucous fibrosis: A review. Aust Dent J 1996;41(5):294-299.
5. Canniff JP. Oral submucous fibrosis: Its pathogenesis and management. Br Dent J 1986;160:429.