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RARE CASE OF AML WITH INITIAL PRESENTATION AS GINGIVAL ENLARGEMENT AND GUM BLEEDING: CASE REPORT

Medical Science

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ABSTRACT

The oral cavity manifests signs of various systemic diseases. This entails thorough examination of the oral mucosa, gingiva, teeth, tongue and other oral tissues.
Occasionally, oral signs can be an expression of systemic conditions such as endocrine imbalance, nutritional deficiencies and blood disorders. Extra medullary involvement of leukemia can occur in up to 40% of patients. One of the rarest sites of extra medullary involvement is the oral cavity, with only 5% or less of all patients with Acute myeloid leukemia (AML) present with gum infiltration. Here we report a rare case of AML with only initial presentation as gum bleeding with mild gingival enlargement without any other systemic symptom in a 50 year old male, non diabetic, non hypertensive and no drug history. Search for the cause of incidental gum bleed revealed him to be suffering from AML subtype 5.
This report emphasizes the importance of the dentist as well as the physician in correlating the oral, systemic and hematological findings in the diagnosis and also of regular recall in the management of a case.

KEYWORDS

CASE REPORT:
A 50 Year old male, presented with Gum bleeding with mild gingival enlargement and loss of stippling of gingiva. The patient had experienced difficulty in swallowing food, nausea, dizziness, and weight loss in the past few months.

History of chest pain was also present for the past one week. Patient was non diabetic, non-hypertensive, alcoholic and chronic smoker for 20 years. On oral examination, pallor of the buccal mucosa and gingiva was observed. The gingival enlargement involved the buccal, labial, palatal and lingual aspect of marginal and attached gingiva of the maxillary and mandibular arches. Gingiva was swollen,shiny, pale pink in color. In the posterior region, the enlargement extended to the occlusal surface of the teeth. The enlargement was firm in consistency with lobulated appearance. There was significant amount of bleeding on probing.

Pseudopockets were present. The oral hygiene was fair. The orthopantomogram revealed generalized horizontal bone loss.

Fig1: Showing Gingival Enlargement

Fig 2: Showing Generalized Horizontal Bone Loss(Both Maxilla And Mandible)

On general physical examination, patient was pale looking, severely anemic, pulse rate 80/min, BP 110/70 mm of Hg, respiratory rate 18/min, and Jugular Venous pulse was not raised. In view of significant gingival bleed on mild probing and fair oral hygiene, CBC was advised which revealed Hemoglobin of 4.2gm/dl, normal total leukocyte count of 7000/cumm and reduced platelet count of 19000/cumm. Further Peripheral smear showed atypical cells.

In light of above, appropriate treatment was given and then he was referred to medical specialist for further investigation that revealed him to be suffering from ACS (Acute coronary syndrome) with AML M5. The patient was treated on the lines of ACS with anti-ischemic and atorvastatin 80mg and 2 units of PRBC were infused, his chest pain subsided and patient was planned for AML chemotherapy. Patient is being followed up and he is on chemotherapy for the same. although gingival enlargement persisted on follow up but its halted progression with chemotherapy indicates that the cause of gingival enlargement was leukemic cell infiltration of gingiva.

DISCUSSION
Gingival enlargement or gingival overgrowth, a common trait of gingival disease, is characterized by an increase in the size of gingiva. Based on etiopathogenesis, enlargements could be inflammatory, drug influenced, those associated with systemic conditions or diseases, neoplastic or false enlargements. Hyperplastic gingivitis secondary to local factors such as periodontal infection or trauma tends to demonstrate erythematous and boggy gingiva localized to a focal area. Drug- induced hyperplasia can be caused by calcium channel blockers such as nifedipine and verapamil hydrochloride; the anticonvulsant such as phenytoin sodium; or the immunosuppressant cyclosporin.(1)

Extra medullary involvement of oral cavity can occur but the overall incidence of Extra medullary disease reported in the literature is not clearly established, ranging from 2.5%(2) to 30%,(3) and varies among different types of AML; patients with monocytic AML (4) and those with t(8;21) (5,6) have a relatively higher incidence.

The recognition of gingival enlargement as an initial oral manifestation of leukemic infiltration assumes great importance, particularly in the early diagnosis of myelomonocytic leukemia.(7,8) Forkner has concluded that the oral manifestation of marked swelling, particularly in the gingiva, can usually be regarded as a characteristic typical of acute monocytic leukemia, while it is usually absent in acute leukemia of the myelogenous or lymphatic varieties.(9)

Osgood reviewed 127 cases of monocytic leukemia, and found that swelling of the gingiva took place in 53% of the patients.(10) Furthermore, Kaufman (11) reported 35% of 40 patients and Berkheiser reported 52% of 29 patients with monocytic leukemia having gingival swelling respectively.

Acute coronary syndrome as an initial presentation of acute leukemia has been reported very rarely . AML can cause cardiovascular diseases

either by leukemic cell infiltration into the myocardium or pericardium, occlusion of coronary arteries by leukemic thrombus (12,13,14).

Although physicians most commonly diagnose leukemia, dentists have been responsible for initiating the diagnosis in 25% patients with acute myelogenousleukemia and 33% of patients with AML. Thus, the dental practitioner should have an awareness of diagnostic signs and complications associated with leukemia to better aid in diagnosis, subsequent treatment, and management.

CONCLUSION:

AML often has oral manifestations as its first indication of the disease, which is what compels them to seek dental care. Hence, dentists are responsible for initiating the diagnosis in 25-33% of patients with AML. Early diagnosis and treatment can improve the patients' chances for remission. Thus, the professional (dental as well as medical) who maintains a high degree of suspicion of unusual oral conditions can play an important role in the prompt referral and treatment of these patients. In conclusion, to aid in early diagnosis and enable subsequent early treatment and management, the dental and medical practitioner must have full knowledge of the diagnostic signs and complications associated with leukemia.

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