Accidental Identification of Thrombocytopenia

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ABSTRACT
Among all bleeding disorders, the idiopathic thrombocytopenia is uncommon disorder. The main aspect is drop in platelet count. The associated symptoms are bruising with minor trauma, ecchymosis, hemorrhagic areas and hematomas, which correlate with count of platelets. There are so many factors which contribute to its development and they are preceded to the signs and symptoms. In this case, there is no such a contributing part which will help to reach the diagnosis, where a 65-year-old woman with average height and built reported in our dental office with intraoral bleeding since past 5 hours. There is no significant history except drug. After managing the oozing of blood, we referred the patient for blood investigations that revealed the idiopathic thrombocytopenia. This can be fatal, if attention is not paid within time.

Hence, during clinical examination, each case is special and one should have the basic knowledge of systemic diseases.

Keywords: Thrombocytopenia, Platelets, Idiopathic, Bruising, Ecchymosis, Spontaneous, Bleeding gums, Transfusion.

INTRODUCTION
Thrombocytopenia (TPA) is a blood disorder, resulted due to reduction in circulating blood platelets.1 The clinical diagnosis is the major dental problem, due to improper data pertaining to the disorder. However, since last few decades, proper attention was paid toward the blood diseases which helped in routine practice of physicians and dentists.2 There is significant role of platelets in circulating blood. It maintains bleeding time within limit during various traumatic conditions and erosions of capillaries.3 The platelets carry different role in circulating blood as follows:

1. Adhesion to collagen fibrils of damaged vessel walls and releases serotonin, adenosine triphosphate (ATP) and adenosine diphosphate (ADP).2 It helps in platelet aggregation and temporary arrest of flow through ruptured vessel walls.
2. Platelets participate in clotting mechanism of blood. It provides lipid or lipoprotein surface which help in catalyzing thrombin; further, it converts fibrinogen to fibrin and ultimately platelet aggregation.4
3. Sometimes platelets participate in prostaglandin synthesis that acts as an inhibitor of platelet aggregation in normal blood flow.

There are different causative factors of platelet disorders, such as autoimmune bacterial and viral infections, structural malformations, like hereditary and acquired disorders, allergy to drugs and skin disorders.5,6 The idiopathic TPA results due to abnormal T cell activity and some glycoproteins, i.e. IIb-IIIa which acts against platelet membrane.7 The incidence of TPA ranges from 50 to 100 cases/million per year. The majority of cases are children; among which the affected children show remission within 6 months.5 The cases in childhood do not show much variation in gender but in adults the ratio between male to female is 1:1.2 to 1.7. Adults have mean age of diagnosis about 56 to 60 years. The probability of remission in adults is 20 to 40% if diagnosed in time.6 Oral manifestations of TPA are seen along with systemic findings; but in the present case the oral findings like bleeding gums preceded the systemic signs, i.e. ecchymosis and bruising/purpura.

CASE REPORT
A 65-year-old female with average built and height reported in our dental office. The routine conversation revealed fair physical and neurobehavioral status. Her complaint was continuous intraoral bleeding since 5 to 6 hours, and she was continuously spitting the blood. There was no relevant history of trauma or physical and mechanical injury.

The intraoral examination of the patient revealed presence of almost all teeth with generalized grade I mobility. The oral hygiene was not so fair which caused prominent edema, inflamed interdental papillae and lack of stippling. There was mild but spontaneous oozing of blood through crevicular areas specially associated with upper anterior and lower anteroposteriors (Fig. 1). Patient denied for pain and other discomfort, but controlling the profuse blood expectoration was a bit challenge. The other intraoral regions, like palate, cheek, tongue, lips and floor of mouth appeared normal during primary observation. There was no such a remarkable medical history except...
analgesics and anti-inflammatory since long time. Based on overall intraoral findings and patient’s history, our provisional diagnosis was chronic gingivitis. Finally, the patient underwent for chair side management of bleeding gums using hemostatic packs, for 15 to 20 minutes, which controlled oozing. Next day, the old lady reported with additional complaints bluish brown patches over the trunk, thighs, hands and face (Fig. 2). Blood investigations report showed, TPA with platelets count reduced to 36,000 per cubic mm (normal range 150,000 to 450,000 per cubic mm). Patient was immediately referred for emergency hospitalization. The blood test after hospitalization showed further drop around 14,000 per cubic mm. RBC morphology was normocytic, normochromic and normal TLC, DLC. Immature cells not detected, so they ruled out leukemia. Whole abdomen sonography revealed mild hepatomegaly. Patient was admitted and taken for platelet transfusion up to proper recovery.

DISCUSSION

Thrombocytopenia (TPA) or penia means presence of relatively few platelets in blood. Generally, normal platelet count in human being is 150,000 to 450,000 per cubic mm. The number of platelets in blood sample can also decrease due to delay between sampling and analysis. Below the optimum level, it leads to bruising and purpura in forearms, thighs and trunk; as well as nasal and gingival bleeding.10 It is vital to elicit detailed medical history to ensure the low platelet count. Due to platelet depletion; round, painless, pinpoint (1-3 mm) petechiae aggregate to form ecchymoses and can be seen anywhere on the body.11 The patient can also complain malaise, fatigue and general weakness with or without accompanying blood loss.

The excessive consumption of painkillers could be considered as key factor for drop in blood platelets in the present case.12 Clinically, it reveals bleeding, petechiae or ecchymoses along with slow oozing of blood even due to minor trauma.13 Platelet count decides the clinical findings, i.e. bruising is observed with minor trauma at level of 30,000 to 50,000 per cubic mm. Spontaneous bruising and bullae containing blood are evident at the count of 15,000 to 30,000 per cubic mm. Below the level of 10,000 per cubic mm multiple hematomas appear in oral cavity, whereas the condition of patient may be fatal at drop of 5,000 per cubic mm. The various factors can result the condition are: Deficiency of vitamin B12, folic acid, liver failure, leukemia, sepsis; viral or bacterial dengue fever, immunologic and hereditary. Sometimes platelet destruction can be due to hemolytic uremic syndrome (HUS). Some drugs are harmful like; valproic acid, methotrexate, carboplatin, interferon, chemotherapy, proton pump inhibitors, heparin, etc.

Some essential tests which help to diagnose TPA: Prothrombin time (PT), partial thromboplastin time (PTT), bleeding time (BT), complete blood test, platelet count, liver enzymes, renal function, ESR, bone marrow study.

Some tips for management of TPA: Eliminate underlying problem, i.e. stop drugs, treat underlying sepsis, role of hematologist, platelet transfusion, corticosteroids and lithium carbonate.

In 1980, the plasmapheresis became the revolutionized treatment measure.

In this case at first examination, we did not find any disease related signs and symptoms locally or systemically. The assessment of severity was beyond the imagination.

CONCLUSION

Each and every case is important, so to justify our patients the basic knowledge of intraoral systemic diseases is mandatory. There should be open-minded clinical observation; considering differential diagnosis. The simple steps can avoid the complications of deadly diseases; because an emergency never knocks the door.

REFERENCES


