CASE REPORT

Idiopathic Thrombocytopenic purpura- A Case Report and an update of recent treatment modalities

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ABSTRACT : Idiopathic Thrombocytopenic Purpura (ITP) being a hemato¬logic disorder is characterized by reduced count of circulating platelets. The clinical presentation of ITP manifest with petechiae, purpura, gingival bleeding and other manifestations which include Gatrointestinal bleeding , petechial spots over the skin and intracranial hemorrhage in fatal conditions. These may be acute or chronic bleeding with mild to severe symptoms. As a dental professional one must aim at arresting the bleeding from oral cavity and to proceed with further treatment along with physician. Delaying the diagnosis may worsen the condition of ITP. We present a case report on ITP and an update on treatment modalities of ITP.

Keywords: *Autoimmne, Gingival bleeding, Idiopathic Thrombocytopenic Purpura, Petechiae, platelets.*

INTRODUCTION:

Idiopathic Thrombocytopenic Purpura is a hematologic disorder which is triggered by autoimmune destruction of platelets resulting in an isolated case of thrombocytopenia. In this condition the bone marrow will relatively be in normal condition, clinically ITP presents with bruising , petechiae , bleeding with absence of other abnormalities. Theories suggest that platelet antibodies opsonizes the platelet membrane which leads to reduction of platelet survival by reticuloendothelial system.(1)

According to a population based study the incidence of ITP is 6.4 per 100000 children and 3.3 per 100000 adults per year is reported(2).On an average of around 70-80% incidence occurs in children in an acute form and they recover in few weeks to months . But in adults the condition is persistent recovering only after treatment

ITP is a diagnosis of exclusion , and is diagnosed provisionally only by history of the patient. The beginning of signs and symptoms,development, duration period, previous episodes of bleeding (in the patient or family), medication intake, drug addiction and the presence of other symptoms and signs, like fever, anemia and adenopathy are relevant information to be enquired prior to the diagnosis of ITP(3) Other important features to be considered is site of bleeding type such as cutaneous (petechiae, bruises or hematomas), digestive (melena), urine (hematuria), genital (metrorrhagia) or-the severest form where bleeding of the central nervous system occurs with presentation of convulsions which might lead to unconsciousness or coma.

For the diagnosis of ITP complete blood count is required. This provides information on qualitative and quantitative count of platelets that supports the diagnosis of idiopathic thrombocytopenia. Mild clinical manifestations occurs when the levels of platelets are between 50,000 and 100,000/mm^3. Purpuric manifestations occurs when the platelet count is below 50,000 mm^3 . Hemorrhagic phenomena can be fatal when platelet count is below 10,000 mm^3.

The function of the platelet is evaluated by bleeding time. Prolonged thrombocytopenia the bleeding time may be > 5min. to identify autoimmune trigger, presence of antiplatelet antibodies by using the platelet-associated immunoglobulin-G (PA-IgG) technique either by direct or indirect technique can be performed. Destruction of platelet due to immune or splenic sequestration shows shortened platelet survival.

Bone marrow examination can also be performed when the cause of thrombocytopenia is still unclear, since platelets are produced from the megakaryocytes. The reduction of megakaryocytes confirms the cause of thrombocytopenia. In cases of ITP the phenomenon is particularly unpredictable due to the triggering of immunological reactions with unknown cause such as stress, physical cause, viral diseases etc.,

After initial diagnosis, ITP is treated in a varied manner that includes local measures to control bleeding with surgical, cellulose foam pack, suturing at the site, administration of tranexamic acid. For severe cases hematologist follows diverse techniques such as hospitalization, platelet transfusion, corticosteroids. For cases that do not respond in first 6 months of treatment with a platelet count below 10,000mm^3 splenectomy is done. [(4)]

As a dental professional insight into ITP is mandatory since the initial manifestations are seen in the oral cavity. Timely referral of ITP cases to a hematologist will save time and life of an individual. This paper comprises of a case report of ITP reported to the department of Oral medicine and Radiology.

Case Report

A 53 year old female patient reported to the department of Oral Medicine and presented with chief complaint of bleeding gums in the upper front tooth region since two days. Patient also had complaints of reddish swelling on the palatal region and left cheek region for past two days and purpuric spots on hands and neck. Swelling was not associated with pain or any other secondary changes. Patient did not have any past medical history of hospitalization. She was not a known diabetic or hypertensive. Extraoral examination revealed petechial spots over the neck and arms. Intraoral examination revealed bleeding from gingiva in upper anterior region, which was inflamed, reddish, tender on palpation, soft in consistency. Purpura present on palate and left buccal mucosa in relation to 38 region along with multiple petechial spots. Based on the clinical findings, a provisional diagnosis of ITP was made . Bleeding was arrested by cellulose foam pack and tranexamic acid 5mg was administered. (5) Hematological examination was adviced , where all the parameters being normal except platelet count showed 52,000/cu mm blood. Biochemical examinations revealed normal liver function tests. Patient was referred to higher centre for further treatment . Patient was treated with Injection methylprednisolone 1 g, intravenous (IV), Once daily was given for 3 days with dexamethasone 8 mg IV,Once daily was given for 3 days with multivitamins for 15 days. 2 units of platelets was transfused on the day of admission and four unit platelets were transfused the following day. Patient was discharged in 7 days . Patient was further treated with prednisolone 5mg with a tapering dose. After a months review , platelet count was raised to 110,000/ cu mm blood . All the lesions resolved completely and there was no complication reported.

Discussion

The clinical presentation of ITP shows typical variability. The bleeding manifestations of thrombocytopenia are petechia, purpura, and easy bruising. The cliché for dental professional in ITP are the typical oral manifestation such as petechial, purpura and ginigival bleeding. ITP manifestations in younger individuals have tendency to resolve quickly, whereas at older individuals it might be fatal. When the platelet count is less than 10,000/cu mm , clinical manifestations begins.[(6)] Treatment protocol should initiate with increasing the count of platelets. To confirm the diagnosis of ITP other causes of thrombocytopenia must be excluded following which further treatment protocol to be followed. Remission occurs in 70-80% of children whereas in adults it is uncommon. There is no defined treatment protocol for ITP, the major goal is to arrest bleeding and increase platelet count. Medications for ITP are administered orally and IV, intramuscular injections are usually avoided due to its tendency of bleeding into the skin. Patients are advised to avoid blood coagulants and analgesics like ibuprofen and aspirin which increases the clotting time of blood. The treatment usually is started with corticosteroids (prenisone/ methylprednisone) IV, followed with IV Ig, platelet infusions or with combination to increase the platelet count. Steroid dose must be tapered after one month treatment. Almost all cases resolves within 1st week of treatment. In severe cases splenectomy is done, as platelet destruction is targeted at spleen. Recently treating ITP with anti-D showed improvement in some cases.(7) Other treatments includes steroid sparing immunosuppresants like azathioprine and mycophenolate mofetil which also shows tremendous results.[(8)-(9)] Some patients also respond to treatments with Rituximab and in rare and severe case a chemotherapeutic agent, vincristine is also used to downregulate the immune system from platelet destruction. The autoimmune etiology of destroying one's own platelet, destroys the donor platelets too in platelet transfusion, hence platelet transfusion is not recommended in most cases. But if platelet plugs form immediately to arrest bleeding this method can be followed. Recent research has

Figure 1: Profuse Bleeding from gingival sulcus in relation to 11,12 region

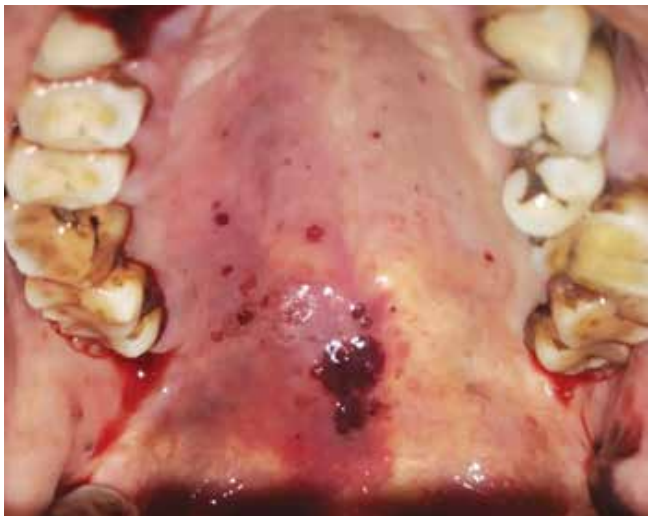

Figure 2: Purpuric spots and petechiae in palate

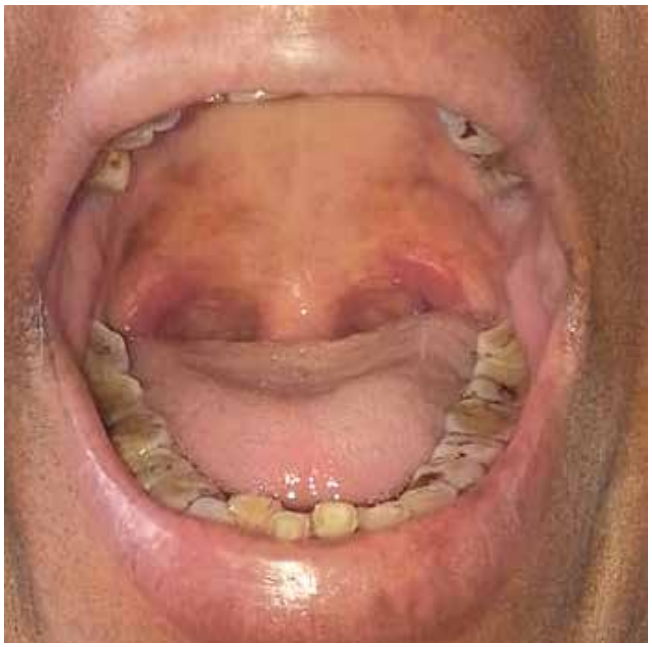

Figure 3: Post treatment

found positive correlation between H.pylori and ITP .Hence the treatment protocol of ITP should involve annihilation of active H.pylori infection. [10]

Conclusion:

ITP occurs due to destruction of platelets abruptly via complex process in immunological system. ITP is a serious condition which might become fatal if oral manifestations are not diagnosed at an earliar stage .Dentist are usually the first ones to encounter patients with oral manifestations of bleeding, petechiae,ecchymosis etc., Hence it is strongly emphasized that a diagnosis of ITP should be considered when a patient presents with above manifestation to render appropriate treatment which can be lifesaving to the patient.

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