Case Report

Immune Thrombocytopenic Purpura Detected as a Result of Dental Examination: A Case Report

G Ertas, M Mısırlıoglu

Department of Oral and Maxillofacial Radiology, Kirikkale University Faculty of Dentistry, Yahsihan, Kirikkale, Turkey

Abstract

Immune thrombocytopenic purpura (ITP) is an autoimmune hematological disorder characterized by mucocutaneous bleeding. Although patients usually suffer from mild mucosal bleeding, visceral bleeding may occur depending on the severity of thrombocytopenia. Therefore, early diagnosis and treatment are of vital importance. In this case report, the diagnosis and treatment process of a patient diagnosed with ITP following acute oral bleeding will be presented. A 38-year-old male patient presented to the dentist with severe gingival bleeding for 2 days. Intraoral and extraoral examinations revealed spontaneous gingival bleeding, hemorrhagic bullae, and purpura. The patient was immediately referred to hematology with a prediagnosis of severe thrombocytopenia and laboratory investigations revealed a platelet count of 2.000/mm^3. Treatment was started for the patient who had a high risk of life-threatening bleeding. After treatment, the patient's platelet count improved and all lesions healed. The high potential of early signs of ITP in the intraoral region makes it necessary for dentists to have knowledge about the mechanism and clinical manifestations of this disease. In this case report, the importance of dentists' awareness of hematological diseases such as ITP in the early diagnosis of the disease and the prevention of possible complications are emphasized.

Keywords: *Dentistry, hemorrhage, oral, purpura, thrombocytopenic*

Received: 31-Aug-2024;
Revision: 19-Dec-2024;
Accepted: 28-Dec-2024;
Published: 27-Mar-2025

Introduction

Immune thrombocytopenic purpura (ITP) is an autoimmune hematological disorder characterized by mucocutaneous bleeding. ITP is a complex immune dysregulation, and it occurs in both children and adults. There is no specific laboratory test for diagnosis. Therefore, other causes of thrombocytopenia should be eliminated.[1,2] The characteristic feature of the disease is petechiae and purpura.[2,3] Dentists may encounter hemorrhagic lesions as the first symptoms of systemic diseases such as ITP during intraoral and extraoral examinations. In this report, a case of acute oral hemorrhage diagnosed as ITP is discussed.

Case Report

A 38-year-old male patient was admitted to our clinic with the complaint of severe gingival bleeding for 2 days. He has no particular disease, medication, or trauma. Extraoral examination revealed clotted blood stain around the lip [Figure 1c], conjunctival hemorrhage [Figure 1a], and multiple petechiae hemorrhages in the lower legs [Figure 1b]. There were multiple hemorrhagic bullae on the buccal mucosa and uvulae and multiple petechiae and purpura on the dorsum of the tongue [Figure 1c-e]. There was no lymphadenopathy detected, but clinical findings suggested a potential hematologic or oncologic condition. The patient was immediately referred to the hematology department with a preliminary diagnosis of thrombocytopenia without any intervention.

Access this article online

Quick Response Code:

Website: www.njcponline.com

DOI: 10.4103/njcp.njcp_579_24

Address for correspondence: Dr. G Ertas, Department of Oral and Maxillofacial Radiology, Kirikkale University Faculty of Dentistry, Yenisehir-No: 1, Yahsihan - 71450, Kirikkale, Turkey.
E-mail: gulsah03ertas@gmail.com

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite this article: Ertas G, Mısırlıoglu M. Immune thrombocytopenic purpura detected as a result of dental examination: A case report. Niger J Clin Pract 2025;28:261-4.

Laboratory tests including complete blood count, prothrombin time (PT), and activated partial thromboplastin (aPTT) time were performed by a hematologist. Tests revealed a tremendous decrease in platelet count. PT **(13.9 second)** and aPTT **(24.2 second)** were within normal limits, but the platelet count was found to be 2000 mm^3. Hepatitis B and C and HIV serology results were negative. Other biochemical examinations, liver function tests were normal. The patient was diagnosed as ITP, and treatment was started: 1 g/kg intravenous immunoglobulin (ivig) was given once.

Table 1: Blood parameters

Test	1. Day	5. Day	14. Day	Reference Units
Platelet (PLT)	2×10^3	95×10^3	16×10^3	$166\text{-}308\times10^3$ µL
Hemoglobulin (Hgb)	13.9	14.3	14.5	13-17 g/dL
Hematocrit (Hct)	39.3	44,2	43.6	% 40-54

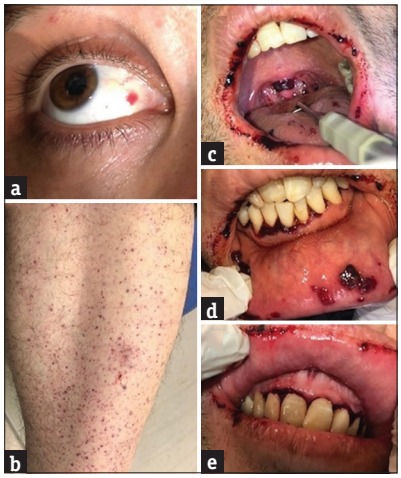

Figure 1: (a) Conjunctival hemorrhage. (b) Purpura on the lower leg. (c) Hemorrhagic bullae on the uvulae, clotted blood on the lips. (d) Hemorrhagic bullae in the oral mucosa. (e) Gingival bleeding

Methylprednisolone 1 mg/kg was given daily for 10 days, B12 1000 µg was given intramuscularly for 5 days, and oral vitamin D replacement was planned. One week after the initiation of treatment, the patient's platelet count increased to 95,000/mm^3. The patient was discharged after a week, and some medications were prescribed: 48 mg methylprednisolone tablet twice a day for 10 days, vitamin B12 250 µg intramuscularly once a week for 5 weeks, and oral vitamin D ampoule once a week for 8 weeks. One week after the patient was discharged, the platelet count increased to 160,000 mm^3 [Table 1]. At the week 3 follow-up examination, all oral lesions had healed and petechiae and purpura on the lower extremities had significantly decreased [Figure 2]. An informed consent form was obtained from the patient.

Discussion

ITP is a disease that has complex pathophysiology and characterized by isolated thrombocytopenia and related mucocutaneous bleeding.[1,4] The increase in platelet-associated immunoglobulin levels suggests that antibodies target platelets for destruction and shorten their lifespan.[3] ITP was previously classified as acute (6 months or less) or chronic. In 2009, new terms were defined for the classification of ITP: newly diagnosed ITP up to 3 months from diagnosis, persistent ITP lasting 3–12 months, and chronic ITP lasting longer than 12 months.[2,5] ITP occurs acutely after an infection or vaccination in children and tends to recover spontaneously. It usually continues as a chronic disease in adults.[2,4] Bleeding-related death is the main concern in thrombocytopenic cases. The most common cause of death has been reported to be intracranial hemorrhage, Despite the serious risk of bleeding, most patients with ITP only require

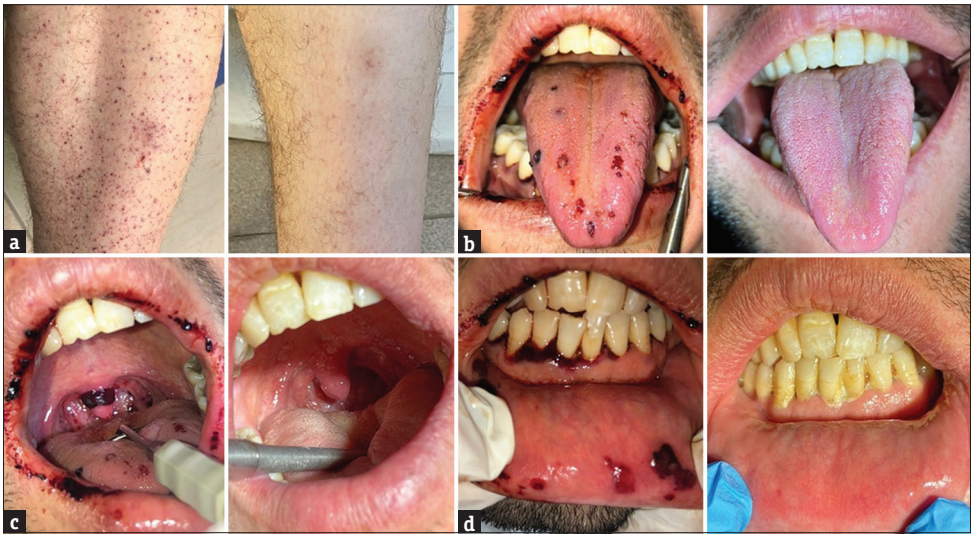

Figure 2: (a) Decreased petechiae and purpura of the lower leg. (b-d) The hemorrhages in the oral mucosa is healed and the gingival bleeding is over

follow-up at regular intervals.[6] It has been observed that unexplained fatigue, headache, and depression due to ITP decrease the quality of life. Fatigue one of the most common signs and symptoms reported by 50% of patients.[7]

The normal range for platelet count is 150,000–400,000 mm^3. If the platelet count is <10,000 mm^3, life-threatening symptoms such as severe mucosal hemorrhage, retinal hemorrhage, hematuria, other system hemorrhages, menorrhagia, and intracranial hemorrhage may occur.[3,8] Although rare in the literature, there are patients similar to our case who went to the dentist with the complaint of intraoral mucosal bleeding and were diagnosed as ITP. In these patients, bleeding gums and hemorrhagic lesions on intraoral examination and extensive petechiae and purpura on extraoral examination were found.[1,3,8] Similarly, in our case, there were hemorrhagic lesions and widespread petechiae in intraoral and extraoral examinations. The platelet count of 2000 mm^3 in the blood tests of the patient explained the spontaneous mucocutaneous hemorrhages. Owing to the risk of serious bleeding, treatment was started on the same day. The incidence of ITP is approximately 4 per 100,000 people. The disease is generally asymptomatic and is often detected incidentally. Age, systemic diseases, and the medication used increase the risk of bleeding.[2] Our patient was symptomatic with spontaneous bleeding due to severe thrombocytopenia independent of other factors. In the literature, it has been reported that ITP is more common in young women.[2,9] Some studies report that it is seen at similar rates in both sexes over the age of 60 years. Unlike the literature, our case was a 38-year-old male patient.

If there are no specific criteria for the diagnosis of ITP, causes of thrombocytopenia should be excluded.[1,8] Thrombocytopenia caused by some drugs and infections should be excluded. Bone marrow aspiration to exclude lymphoma, acute leukemia, aplastic anemia and metastatic diseases, Coombs test for autoimmune hemolysis, and serological tests for HIV infection should be performed.[5] In our case, viral, immunological, and biochemical tests for the etiology of ITP were normal. Based on all this information, the diagnosis was immune thrombocytopenic purpura. Treatment should be initiated in patients with a platelet count of <30,000 mm^3 or with a platelet count of >30,000 mm^3 and severe bleeding findings Corticosteroids, splenectomy as additional options and immunosuppressives are the first line of treatment. The best approach is to personalize the treatment, taking into account the patients' various risk situations.[5,8,10]

There is a high risk of bleeding in dental treatments. Life-threatening bleeding has been observed in these patients after dental surgery.[6] In cases such as easy bruising or excessive bleeding after mild trauma, spontaneous gingival bleeding, and permanent bleeding after tooth extraction, the physician should suspect a hematological disease.

This report presented the emergency management of a life-threatening any excessive bleeding in an adult with acute ITP. This research did not receive grants from funding agencies.

Conclusion

Dentists must be knowledgeable about hematologic disorders for early diagnosis and safe dental treatment. A multidisciplinary approach involving dentists and hematologists is critical to preventing life-threatening complications. In patients with stable platelet counts, simple medical interventions can control bleeding, but pretreatment laboratory tests are always advisable to mitigate the high risk associated with dental procedures.

Informed consent

An informed consent form was obtained from the patient for publication of the details of his medical case and any accompanying images.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Lanza A, Di Spirito F, Petrosino S, Sbordone L. Oral healthcare and idiopathic thrombocytopenic purpura: Early recognition, dental management and case report. Dent J 2021;9:108. doi: 10.3390/dj9090108.
2. Provan D, Newland AC. Current management of primary immune thrombocytopenia. Adv Ther 2015;32:875-87.
3. Kayal L, Jayachandran S, Singh K. Idiopathic thrombocytopenic purpura. Contemp Clin Dent 2014;5:410-4.
4. Thadchanamoorthy V, Dayasiri K. Dengue hemorrhagic fever as a rare cause of chronic ımmune thrombocytopenic purpura. A pediatric case report. Trop Med Health 2020;48:1-5.
5. Onisâi M, Vlădăreanu AM, Spînu A, Găman M, Bumbea H. Idiopathic thrombocytopenic purpura (ITP). New era for an old disease. Rom J Intern Med 2019;57:273-83.
6. Lee S-T, Kim J-W, Kwon T-G. Life-threating outcomes after dental implantation in patient with idiopathic thrombocytopenic purpura: A case report and review of literature. Maxillofac Plast Reconstr Surg 2018;40:1-7.
7. Cooper N, Kruse, Kruse C, WatsonS, Morgan M, Provan D, *et al*. Immune thrombocytopenia (ITP) World Impact Survey: Patient and physician perceptions of diagnosis, signs and symptoms, and treatment. Am J Hematol 2021;96:188-98.

8. Bal MV, Koyuncuoglu CZ, Saygun I. Immune thrombocytopenic purpura presenting as unprovoked gingival hemorrhage: A case report. Open Dent J 2014;8:164.
9. Thakre R, Gharde P, Raghuwanshi M. Idiopathic thrombocytopenic purpura: Current limitations and management. Cureus 2023;15:e49313. doi: 10.7759/cureus.49313.
10. Chandan J, Thomas T, Lee S, Marshall T, Willis B, Nirantharakumar K, *et al*. The association between idiopathic thrombocytopenic purpura and cardiovascular disease: A retrospective cohort study. J Thromb Haemost 2018;16:474-80.