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Oral Health Management in Patients with Fibrinolysis Defects

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Definition and Clinical Relevance

Fibrinolytic disorders refer to abnormalities in the system responsible for breaking down fibrin clots. Under normal conditions, fibrinolysis occurs once tissue healing is complete. In these patients, fibrin is degraded prematurely or excessively, leading to delayed or prolonged bleeding, often several hours after a dental procedure. These disorders may be inherited (rare) or acquired, and are frequently underdiagnosed in clinical practice

General Classification

1) Primary (congenital) hyperfibrinolysis:

• Genetic mutations affecting plasminogen, plasmin inhibitors, or activators: very rare; often with a family history of delayed bleeding

2) Secondary (acquired) hyperfibrinolysis:

• Major surgery or trauma
• Advanced liver disease
• Use of fibrinolytic agents (e.g., alteplase, streptokinase)
• Disseminated intravascular coagulation (DIC)

Typical Oral Manifestations

• Recurrent bleeding after initially controlled procedures
• Persistent bleeding beyond 24–48 hours postoperatively
• Spontaneous oral ecchymoses or hematomas
• Bleeding recurrence after pressure packs are removed

Recommended Dental Management

1. Initial Assessment:

• Detailed medical history focusing on prolonged or delayed bleeding after past procedures
• Determine if patient is on fibrinolytic medications or has underlying liver disease

2. Non-Invasive Procedures:

• Can be performed under routine precautions
• Advise the patient to report delayed bleeding events

3. Invasive Procedures (extractions, deep scaling, periodontal surgery):

• Must be performed only with prior hematologist approval
• Antifibrinolytics (e.g., tranexamic acid) are essential both topically and/or systemically
• Maintain local pressure for at least 30–60 minutes
• Use hemostatic sutures and atraumatic surgical techniques

Recommended Tests by the Dentist

• Complete blood count (CBC)
• PT and aPTT (may be normal)
• D-dimer (may be elevated)
• Plasma fibrinogen (may be decreased in severe cases)
• Specific tests: Euglobulin lysis time (ordered by the hematologist)

4. Postoperative Care:
• Rinse with tranexamic acid 4 times daily for 5–7 days
• Avoid forceful rinsing, hot foods, and brushing near the surgical site for the first 48 hours
• Monitor closely for at least 72 hours due to risk of delayed bleeding

Referral to Hematologist

Any patient with suspected fibrinolytic disorder must be referred to a hematologist for evaluation and specialized testing. The hematologist will determine the need for systemic antifibrinolytic therapy and appropriate perioperative management.

References

1. Silva LM, Divaris K, Bugge TH, et al. Plasmin-Mediated Fibrinolysis in Periodontitis Pathogenesis. J Dent Res. 2023 Aug;102(9):972-978.
2. Souza AF, Rocha AL, Silva RKM, et al Hemorrhagic complications in individuals with liver disease submitted to minor oral surgery. Blood Coagul Fibrinolysis. 2022 Oct 1;33(7):412-417.
3. Sindet-Pedersen S. Haemostasis in oral surgery--the possible pathogenetic implications of oral fibrinolysis on bleeding. Experimental and clinical studies of the haemostatic balance in the oral cavity, with particular reference to patients with acquired and congenital defects of the coagulation system. Dan Med Bull. 1991 Dec;38(6):427-43.

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