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Thrombocytopenia in Dental Patients: Essential Guidelines for Effective Management

Definition and Clinical Relevance

Thrombocytopenia is defined as a decrease in platelet count below 150,000/mm³. Platelets are essential for primary hemostasis, and their deficiency significantly increases the risk of bleeding, both spontaneous and iatrogenic during dental procedures. The etiology may be central (decreased production), peripheral (increased destruction), or due to splenic sequestration

Classification by Platelet Count

- Mild: 100,000 – 150,000/mm³ • Moderate: 50,000 – 99,000/mm³
- Severe: <50,000/mm³ • Critical (high risk): <30,000/mm³

Common Causes of Thrombocytopenia

- Immune-related: immune thrombocytopenic purpura (ITP), lupus erythematosus
- Drug-induced: heparin, chemotherapy, NSAIDs, certain antibiotics
- Viral infections: HIV, hepatitis, Epstein-Barr virus
- Hematologic malignancies: leukemias, myelodysplastic syndromes
- Bone marrow failure: aplastic anemia
- Splenomegaly and platelet sequestration

Oral Manifestations

- Petechiae on oral or palatal mucosa
- Ecchymosis after brushing or chewing
- Spontaneous gingival bleeding
- Submucosal hematomas
- Excessive bleeding in response to minor procedures

Recommended Dental Management

1. Evaluation and Planning:

- Dental treatment should begin only after reviewing recent coagulation studies (preferably within the last 7 days)
- Surgical procedures are contraindicated if platelets <75,000/mm³ without prior medical clearance and hematologic support
- Antibiotic prophylaxis may be indicated if the patient is immunocompromised

2. Non-invasive Procedures:

- Allowed if platelets >50,000/mm³ and no active bleeding
- Examples: restorations, sealants, oral hygiene instructions
- Avoid sharp instruments and ultrasonic devices without prior hematologic assessment

3. Surgical or Bleeding-Risk Procedures:

- Permissible only if platelets $>75,000\text{--}100,000/\text{mm}^3$ or with prior platelet transfusion
- Written clearance from the hematologist is required
- Use of atraumatic techniques, hemostatic sutures, extended compression, and topical antifibrinolytics (e.g., tranexamic acid in mouthwash or soaked gauze) is recommended

4. Local Anesthesia

- Infiltrative anesthesia is permitted if patient is stable
- Nerve blocks must be avoided unless under full hematologic coverage

Referral to Hematologist

Every patient with thrombocytopenia must be referred to a hematologist for etiologic diagnosis, stabilization prior to any invasive procedure, and to assess the need for platelet transfusions or immunosuppressive therapy.

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