Questions to Ask / Necessary Information

- First determine the type of anemia. (Iron deficiency, Vitamin B12 deficiency, hemolytic, sickle cell, thalassemia, aplastic etc)
- Do you feel weak or fatigued? Rapid heartbeat, or shortness of breath particularly with exercise?
- Do you have frequent infections?
- Do you feel mouth pain or soreness? Ulcers?
- Do you feel nauseated frequently? Constipation or vomiting?
- Do you feel irritable? Do you have insomnia?
- Do you have tingling or numbness in your extremities?
- Do any of your relatives have any blood disorders?
- Use of nonsteroidal anti-inflammatory, pregnancies, hypothyroidism, jaundice, gallstones, splenectomy, bleeding disorders and abnormal Hb, and organ transplantation.
- In children, the history should identify patterns of growth.

Risk for Medical Emergency

- Assessment of the severity of a patient’s anemia is important for preventing complications.
- Risk of bleeding and/or infection are increased in many anemias: aplastic anemia, severe iron deficiency anemia, pernicious anemia, glucose-6-phosphate dehydrogenase deficiency. These risks can be avoided by taking a complete medical history, obtaining pertinent lab information, and following management protocols.
- Dehydration and hypoxia can cause crisis.
- Patients with anemia, particularly men, may have a serious underlying disease such as peptic ulcer or carcinoma, for which early detection may be lifesaving.
- Delays in dental treatment may be required for patients who have anemia due to severe underlying conditions.
- Risk of cellulitis in sickle cell patients.

Pertinent Laboratory Information

- Hb level
- Hematocrit
- RBC indices (MCV, MCH, RDW, MCHC)
- Total WBC
- Platelet count
- Screening tests should include complete and differential blood counts, a smear for cell morphologic study, determination of Hb or hematocrit, a Sickledex test (for African American patients), and platelet count. If screening tests are ordered by the dentist and results of one or more are abnormal, the patient should be referred for medical evaluation and treatment.
Management For Dental Treatment

- **Preoperative Management**
  - Determine type of anemia (Fe deficiency, sickle cell, G6PD, etc.) and make sure patient's condition is under good control before any routine dental treatment. Usually there are no modification unless anemia is severe.
  - Elective surgical procedures are best avoided in patients with sickle cell anemia (routine dental care for non-crisis state patients). Dental infection should be avoided, if occur must be dealt with immediately.

- **Management During Treatment**
  - Avoid long and complicated procedures
  - Use of local anesthetic with epinephrine stronger than 1:100,000 must be avoided
  - Avoid septocaine and prilocaine (can result in methemoglobinemia)
  - For sickle cell patients: reduce stress, IV sedation under extreme caution, barbituates and narcotics should be avoided at all costs.
  - Adequate oxygenation should be provided during nitrous oxide inhalation procedures.
  - Pulse oximetry monitoring is prudent during dental treatment of all patients with anemia.

- **Postoperative Management**
  - When indicated, supportive therapy to avoid bleeding complications
  - If low WBC, antibiotics are necessary to avoid postoperative infection
  - Avoid NSAIDs and Aspirin
  - Special emphasis should be placed on oral hygiene procedures to avoid development of dental caries, gingival inflammation, and infection.
  - Some patients with iron deficiency anemia develop Plummer-Vinson syndrome. Patients with this syndrome should be monitored closely for any oral or pharyngeal tissue changes that might be early indicators of carcinoma.
  - Patients with G-6-PD deficiency exhibit an increased incidence of drug sensitivity, with sulfonamides (sulfamethoxazole), aspirin, and chloramphenicol being the prime offenders.

Oral Manifestations

Many oral manifestations are common to different type of anemia, but some may be more specific (Oral findings in patients with anemia usually relate to the underlying cause of the anemia):

- Pale oral mucosa
- Loss of papillae from tongue
- Angular cheilitis
- Oral infection
- Aphthae
- Burning or sore tongue
- Ulcerative stomatitis
- Oral petechiae
- Gingival hypertrophy
- Gingival bleeding
- Patients with sickle cell anemia often have delayed eruption of teeth and dental hypoplasia.

References