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Blood Transfusion History:

And the effects it has on dental patient
management and considerations

Grace Schroeder

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Blood Transfusion History:**And the effects it has on dental patient management and considerations**

Before patient treatment is implemented, or even planned, many different factors regarding the individual patient's medical history must be given important consideration. This is to avoid procedure-related complications and to assure that the patient's health and safety are maintained at the most optimal levels possible, while also providing them with indicated dental care. One such piece of pertinent information obtained from patients includes whether or not they have a history of blood transfusion(s). This can include previous singular experiences, previous repeated transfusions, and ongoing repeated transfusions. What may complicate this piece of history further, with consideration for dental treatment, are the possible added contraindications presented by both the conditions that warranted a transfusion(s) and conditions that have arisen due to the transfusion(s).

Blood loss due to traumatic injury or childbirth is one reason that a single experience with blood transfusion may occur. Transfusions may also be indicated for patients with chronic blood and/or immune diseases. For example, repeated transfusions are sometimes given to patients who present with hemophilia, renal failure, AIDS, and sickle cell anemia. Though transfusions of RBCs are often only given to patients whose conditions are severe or involve active bleeding (Falace, 368).

Potential patient exposure risks from infected donor blood are present during transfusions, including possible exposure to Hepatitis B and C and are at a higher [though still uncommon] risk of contracting bacterial endocarditis (Dummer, 169). Another theory for how receiving a blood transfusion may suppress the patient's immune system has been studied in

patients who have received repeated transfusions. It is thought that receiving multiple transfusions diminishes the ratio of helper to suppressor lymphocytes and by decreases the activity of Natural Killer cells (Gitlin, 2).

The medical interview/history review is one of the clinician's most valuable diagnostic and therapeutic tools. Beginning the interview with a short introduction helps to establish patient-clinician rapport, and also lends to ease the patient into a more comfortable state before going over information that may be uncomfortable or worrisome for the patient to discuss (Lichstein). During the medical history review, it is important to identify conditions associated with blood transfusions and related patient disorders. Information gathered may include, but may not be limited to, nutrition/malnutrition, alcohol or drug use, familial history, pregnancies, abnormal Hb, bleeding disorders, and organ transplants (Fallace, 368). Pertinent questions to ask during the medical interview include "what was the reason(s) that you received a blood transfusion(s)?" "Were there any complications related to your transfusion? Please explain." And "Do you feel that your condition improved or worsened since the transfusion?"

The answers to such questions allow the clinician to get a better picture of the patient's medical history, especially in regards to their blood transfusion(s). They also allow the patient to add details that might not be shared otherwise due to the unspecific nature of medical history forms. Finally, allowing the patient to elaborate on this piece of their history may also shed light on possible undiagnosed conditions; both related or unrelated (Lichstein).

Confirmation of a stable condition from the patient's physician may be indicated prior to treatment, especially when the transfusion patient has other related medical conditions. Planning for shorter morning appointments without complicated procedures will enhance patient safety

during treatment. It is important that the hygienist/clinician stress a more aggressive home care routine. This is especially important for patients whose health status disallows some to most dental procedures. When using nitrous oxide-oxygen for transfusion patients with blood disorders (such as sickle cell anemia), oxygen levels should be greater than 50% with a high flow rate and adequate ventilation to ensure that the patient receives enough oxygen to sufficiently supply their tissues, brain, and heart. Oxygen should be kept at hand in case of blood-oxygen level emergencies. Oral infection should be avoided as the patient's blood supply may be already compromised due to both the transfusions and [possibly] a complex medical history. Antibiotics may be recommended for major surgical procedures to prevent wound infection (Fallace, 369). Oral surgical procedures are at a high-risk for causing oral infections. It should be made certain that abnormal hemoglobin is 40% or less before surgery is performed (Amamoo, 319). It may also be indicated that a patient receive a blood transfusion prior to treatment to correct homeostatic imbalances in the blood. This may lead to treatment delays and/or modifications (Fallace, 370).

Potential medical emergencies for patients who have received blood transfusions include issues related directly to the underlying cause for the need of a transfusion and related conditions, several of which have been discussed in this paper. The clinician should be alert for anemia-related episodes and other issues involving low blood-oxygen levels. Monitoring the patient for changes in responsiveness, pallor, breathing rate, heart rate, and other signs of possible patient issues may help the clinician to prevent medical emergencies from occurring or worsening. Administration of oxygen, patient positioning, and the employing the ABCs of breathing are all helpful emergency management protocols.

Medications taken by patients who have received one or more blood transfusions vary depending on transfusion background and existing conditions. For patients with sickle cell anemia, local analgesics and other pain management medications may be employed (specifically acetaminophen), though there currently are no cures or crisis prevention treatments (Amamoo, 318). Patients with chronic renal failure may be using the anticoagulant Warfarin and lamivudine (a reverse transcriptase inhibitor) is used to treat patients with chronic hepatitis B (Dummer, 169).

Works Cited

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1) Donated blood used in transfusions does not put the patient at risk of disease exposure.

- a. True
- b. False**

* Potential patient exposure risks from infected donor blood are present during transfusions, including possible exposure to Hepatitis B and C and are at a higher [though still uncommon] risk of contracting bacterial endocarditis (Dummer, 169)

2) Fill in the blank: Abnormal hemoglobin count must be _____ or less before surgery is performed on a patient who has received a blood transfusion.

Answer: 40%

*(Amamoo, 319)

3) Blood transfusions may be indicated for persons with the following conditions (Select all that apply):

- a. Chronic renal failure**
- b. Sickle Cell Anemia**
- c. Chronic liver disease
- d. AIDS**

*(Falace, 368)