Dr. Keyvan Karkouti, Intra-op Patient Blood Management: Tranexamic Acid; Salvage and Triggers

This lecture will provide an overview of the aspects of perioperative blood management that apply to the intraoperative period, focusing on strategies for minimizing blood loss and managing anemia during surgery. Each modality will be reviewed in the context of effectiveness, safety, and cost.

Specific areas that will be covered are:

- For minimizing blood loss:
  - Anesthetic blood sparing techniques
    - Value is mostly in improving surgical field rather than blood conservation per se
  - Acute normovolemic hemodilution
    - Not a very effective modality and safety has not been appropriately addressed
    - May have a niche role in certain areas in modified version (e.g., cardiac surgery)
  - Cell salvage
    - Effective, safe, and relatively inexpensive
    - Should be used when risk for high-blood loss exists
  - Pharmacologic therapies, focusing on tranexamic acid
    - A lot of data on tranexamic acid
    - Review of indications and dosage
  - Point-of-care based coagulation management algorithms
    - High-level evidence that their use reduces transfusions and bleeding
- For managing anemia during surgery:
  - Improve tolerance of anemia
    - While effective in the short term, this is not a useful strategy given that patients will have to deal with the consequences of anemia in the postoperative period.
    - Might be useful for supportive therapy in severely anemic patients who do not accept transfusions
  - Evidence-based transfusion thresholds
    - Outlining the importance of patient centered care when it comes to the transfusion decision
    - Reviewing the applicability of restrictive versus liberal transfusion studies for intraoperative care