Bipolar sealing in revision total hip arthroplasty for infection: efficacy

and cost analysis.

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Abstract:

Saline-coupled bipolar sealing has shown mixed results in primary arthroplasty. However, this

technology has not been studied in infected revision total hip arthroplasty (THA), where morbidity is

higher and conventional methods of blood management, such as cell salvage, often cannot be used.

This case-matched study of 76 consecutive revision THA for infection included an experimental

bipolar sealing group and a control group of conventional electrocautery. Groups were matched for

gender, body mass index, American Society of Anesthesiologists classification, and surgery type.

Total blood loss, intraoperative blood loss, and perioperative hemoglobin drop were significantly less

in the experimental group. In addition, operative time was significantly shorter in the experimental

group, which translated into gross savings approximately equal to the cost of the device. The

decreases in total blood loss and perioperative hemoglobin decline, along with financial savings,

may support the use of bipolar sealing in infected revision THA.

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