

The Critical Role of Hemostasis in Robotics

Have you considered how controlling hemostasis in robotic surgery can influence visibility, control, and the course of a procedure? In robotic surgery, precision depends on what surgeons can see. When bleeding obscures the field, even briefly, it can interrupt workflow, delay decisions, and challenge the advantages that minimally invasive approaches are designed to deliver.[1]

As robotic platforms continue to expand across procedures, one clinical priority remains consistent: effective hemostasis.

Despite advances in minimally invasive and robotic techniques, effective bleeding management remains an important component of procedural success. In practice, the opposite can often be true. In robotic-assisted procedures, visualization is a critical component of safe and efficient surgery. Even limited bleeding can quickly obscure critical anatomy, forcing pauses in the procedure and disrupting the rhythm of a robotic case.[1]

Maintaining a clear field is essential for translating visualization into action. Surgeons rely on uninterrupted visibility to guide dissection, confirm anatomy, and make precise intraoperative decisions. When hemostasis is achieved efficiently, it helps maintain visualization and supports procedural continuity throughout the case.[1]

Hemostasis remains essential to surgical care and procedural efficiency. In patients undergoing intracerebral hemorrhage evacuation, robot-assisted surgery was associated with higher hematoma evacuation rates and shorter hospital stays compared with conventional frame-based surgery, without an increase in postoperative complications.[2]



As robotic surgery continues to grow, with millions of procedures performed annually worldwide, the foundations of surgical success remain rooted in the cognitive, technical, and team-based skills required for safe and effective robotic-assisted surgery.[3]

For surgical teams, the goal is not simply to adopt new technology, but to fully realize its benefits. That requires a disciplined focus on the factors that enable precision, efficiency, and consistency in every case.

In robotic surgery, hemostasis is not secondary. It is central to maintaining visibility, supporting confident decision-making, and helping protect the minimally invasive advantage.

Learn more about the importance of hemostasis: advancedsurgery.baxter.com/vibe

References

1. Novellis P, et al. Management of robotic bleeding complications. Ann Cardiothorac Surg. 2019;8(2):292-295.
2. Lou L, et al. Robot assisted stereotactic surgery improves hematoma evacuation in intracerebral hemorrhage compared to frame based method. Scientific Reports. 2025;15:12427.
3. Hatcher Aj, et al. The evolution of surgical skills simulation education: Robotic skills. Surgery. 2025;181:109173.

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