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LETTER TO THE EDITOR

Coagulopathy related to hemodilution and acidosis

Satoshi Ideno[1] · Hiroyuki Seki[1] · Hiroshi Morisaki[1]

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To the Editor:

Dodd et al. [1] described a case of excessive absorption of irrigation normal saline during holmium laser enucleation of the prostate (HoLEP). Although the use of normal saline for irrigation offers the advantage of avoiding typical transurethral resection (TUR) syndrome, the risk of respiratory failure or hyperchloremic metabolic acidosis remains.

In general, HoLEP has fewer bleeding complications compared with conventional TUR of the prostate. In this case, however, increased hemorrhage was a problem, and the patient needed a transfusion. Blood loss seemed to be minimal intraoperatively, indicating that perioperative hemorrhage was not negligible. What do authors think was the main cause of increased hemorrhage?

We speculated that coagulopathy related to hemodilution and severe acidosis may have contributed to the increased hemorrhage. Severe acidosis (pH <7.2) inhibits the propagation phase of thrombin generation and accelerates fibrinogen degradation [2], which leads to a potential deficit in fibrinogen availability. In addition, hemodilution causes coagulation disturbance both in vivo and vitro [3]. As severe metabolic acidosis and massive hemodilution occurred in this case, the question is whether the patient showed any coagulation disturbance in the perioperative period.

References

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✉ Satoshi Ideno
doctor_idebon@keio.jp

[1] Department of Anesthesiology, School of Medicine, Keio University, 35 Shinanomachi, Shinjuku, Tokyo 160-8582, Japan