



Facial Telangiectasia Bleeding After Laparoscopic Radical Nephrectomy in Trendelenburg Position

LETTER
TO THE EDITOR

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Dear Editor,

Spider angioma is a group of dilated small vessels occurring in patients with alcoholism and impaired liver function. The symptom often localizes on the face and body due to liver disease. Several theories explain its pathogenesis. A possible explanation is that the metabolism of estrogens deteriorates because of impaired liver function (1). Another hypothesis is that vascular endothelial growth factor and basic fibroblast growth factor play a role in spider angioma (2). Telangiectasia indicates dilated small vessels occurring on the upper part of body and face due to inflammatory disease, radiotherapy, long-term exposure to the sun, and chronic alcoholism (3).

Pneumoperitoneum and the patient position during laparoscopic surgery can result in several complications. An adhesive tape is a multipurpose material used per-/postoperatively. It is known that different types of skin lesions can occur, particularly in babies and older people with a thin and fragile skin, due to the use of an adhesive tape. Here we present a clinic case of subcutaneous bleeding on the face of a patient with a thin skin, featuring prevalent telangiectasia and spider angioma. The patient underwent laparoscopic surgery in the Trendelenburg position, and an adhesive tape was used on his face.

A 78-year-old male patient with a left kidney tumor was hospitalized to undergo laparoscopic radical nephrectomy. He was taking antihypertensive drugs, including beta-blocker, and consuming alcohol on a regular basis. Laboratory findings were normal, except for elevated Aspartate aminotransferase (AST) levels. His medical history included alcohol rehabilitation for a short while 10 years ago caused by liver malfunctioning. He had spider angioma and widely spread telangiectasia on his face. After preoperative examinations were performed, the patient was taken to the operating room with midazolam premedication. He was routinely monitored (ECG, SpO₂, noninvasive BP), and his arterial pressure was recorded as 159/74 mmHg upon his entrance to the OR. Remifentanyl infusion was started, following which the patient was intubated using propofol and rocuronium. Arterial pressure, CVP, and temperature were monitored by cannulation of the radial artery, by catheterization of the right internal jugular artery, and using an esophageal probe, respectively. An epidural catheter was inserted the level of T12-L1 in the lateral decubitus position, and epidural continuous infusion was started. Anesthesia was continued using desfluran, O₂/air, remifentanyl, and rocuronium infusion.

Intra-abdominal pressure was maintained to not exceed 16 mmHg, and systolic blood pressure was maintained to not exceed 180 mmHg by changing the inhalational anesthetic concentration throughout the procedure. The radical nephrectomy procedure was completed in 3 hours.

When the patient was extubated in the operating room, he was conscious and pain free. At the time of extubation, after removing the self-adhesive tape (Hypafix; Hamburg, Germany) from his cheeks, minor subcutaneous bleeding was noticed. Ten minutes after the patient was taken to the recovery room, we observed that the subcutaneous bleeding spread and was darker in color on his cheeks (Figures 1-2). His left eyelid, which had also been covered with the adhesive tape, had light purpura. The patient was informed about the clinical course of the bleeding in the ward. The ecchymosis was resorbed in a few days. The patient was discharged 3 days after the surgery and recovered without complications.

Insufflation of carbon dioxide intraperitoneally in laparoscopic surgeries leads to the increase in intra-abdominal pressure and vascular resistance (and consequently, arterial pressure). This sequence of events leads to venous stasis, decreased respiratory compliance, and eventually, increased airway pressure (4).

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Figure 1. The subcutaneous bleeding on his cheeks and also his left eyelid had light purpura



Figure 2. The subcutaneous bleeding spread and was darker in color on his cheeks

This increase in pressure is then carried to the thoracic cavity and superior vena cava. The anesthetic concerns of patients undergoing laparoscopic procedures are related to the use of the pneumoperitoneum. Cerebrovascular, respiratory, and hemodynamic homeostasis may be affected in this situations (5). To facilitate this surgery, the patient must be in the steep Trendelenburg position for a long duration. A significant increase in MAP and CVP was noted after creating the pneumoperitoneum and after placing the patient in the Trendelenburg position (6). The pneumoperitoneum and the Trendelenburg position resulted in widespread purpura due to dilation of thin veins on the patient's thin skin. It is probable that after removing the adhesive tape, the pressure on the capillaries vanished and bleeding of the fragile veins increased. Complications

of laparoscopy in the Trendelenburg position, such as an increase in intracranial pressure as well as brain, corneal, and conjunctival edema or nerve damage, are known to exist. This is the first time we observed this sort of purpura as a complication of laparoscopy in the Trendelenburg position, and such a case does not exist in the literature. We think that even if the intubation was performed with a material other than an adhesive tape, the prevention of this purpura was not guaranteed. We believe that the adhesive tapes partially prevented bleeding by applying pressure to the area they were on but increased the bleeding after they were removed. (The bleeding was increased in the PACU.)

We would like to emphasize on the importance of using less traumatic methods instead of an adhesive tape to fix the tube on patients with spider angioma or facial telangiectasia as well as indicate the possible mechanical harms of the Trendelenburg position during laparoscopic procedures in order to avoid similarly disheartening situations, albeit of no clinical importance. It is important that the anesthesiologists should be aware of its possibility in any laparoscopic surgical procedures performed in the Trendelenburg position.

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REFERENCES

1. Li CP, Lee FY, Hwang SJ, Chang FY, Lin HC, Lu RH, et al. Spider angiomas in patients with liver cirrhosis: role of alcoholism and impaired liver function. *Scand J Gastroenterol* 1999; 34(5): 520-3. [\[CrossRef\]](#)
2. Li CP, Lee FY, Hwang SJ, Lu RH, Lee WP, Chao Y, et al. Spider angiomas in patients with liver cirrhosis: role of vascular endothelial growth factor and basic fibroblast growth factor. *World J Gastroenterol* 2003; 9(12): 2832-5. [\[CrossRef\]](#)
3. Rothe MJ, Grant-Kels JM. Nomenclature of the primary telangiectasias. *Int J Dermatol* 1992; 31(5): 320. [\[CrossRef\]](#)
4. Nguyen NT, Wolfe BM. The physiologic effects of pneumoperitoneum in the morbidly obese. *Ann Surg* 2005; 241(2): 219-26. [\[CrossRef\]](#)
5. Gainsburg DM. Anesthetic concerns for robotic-assisted laparoscopic radical prostatectomy. *Minerva Anesthesiol* 2012; 78(5): 596-604.
6. Parikh BK, Shah VR, Modi PR, et al. Anaesthesia for laparoscopic kidney transplantation: Influence of Trendelenburg position and CO2 pneumoperitoneum on cardiovascular, respiratory and renal function. *Indian J Anaesth* 2013; 57(3): 253-8. [\[CrossRef\]](#)