

Aborted truncal abdominal wall nerve block due to subcutaneous emphysema after laparoscopic surgery

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Background

- The ideal timing of truncal abdominal wall blocks has not been established.
- Studies reveal conflicting results.
 - A prospective, randomized control trial showed patients who received pre-operative TAP blocks had lower pain scores and received lower doses of IV opioids while in PACU when compared to patients who received a post-operative TAP block⁵.
 - A retrospective study found a significantly lower need for PCA and opioids on discharge in patients who received a TAP block post-operatively compared to pre-operatively².
 - Multiple retrospective studies found no difference in outcomes between pre- and post-operative block^{3,4}.
- This case report describes a complication of performing truncal abdominal wall blocks post-operatively.

Case Report

- 70F presented for robotic laparoscopic splenectomy and distal pancreatectomy for dilated pancreatic duct.
- TAP blocks for post-operative analgesia were attempted post-operatively, prior to emergence from general anesthesia. However, they were unable to be completed and were aborted.
- When the ultrasound probe was placed on the patient, visualization of anatomical landmarks was difficult due to extensive subcutaneous air (Figure 1), possibly from a maligned trocar.
- Bilateral rectus sheath and lateral TAP blocks were deemed impossible, and the blocks were aborted.
- CT performed on POD#2 for tumor staging revealed extensive subcutaneous emphysema throughout the anterior body wall (Figure 3).

Ultrasound Images

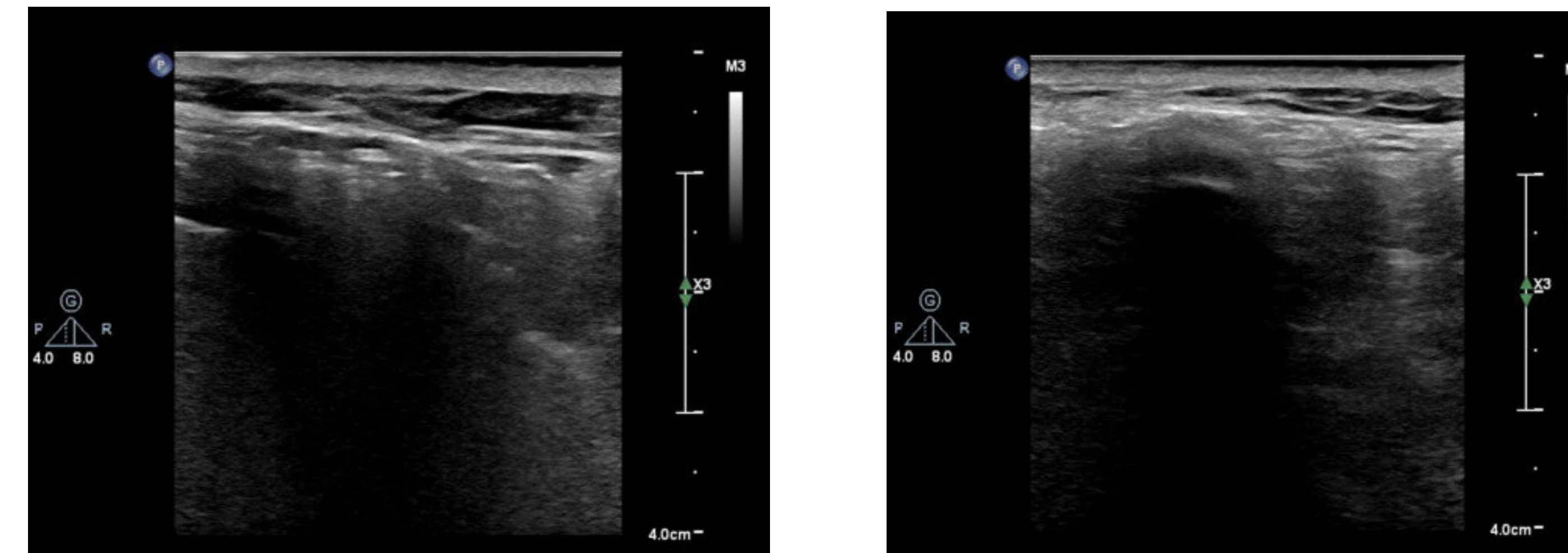


Figure 1: Subcutaneous air distorting anatomy on ultrasonography

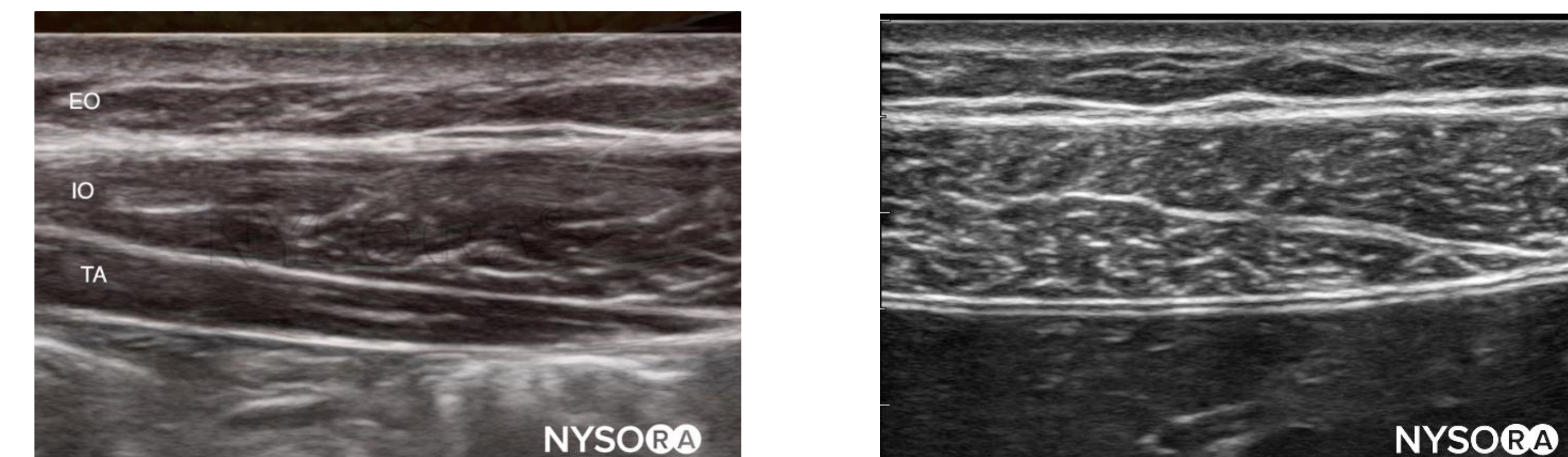


Figure 2: Normal ultrasonography of lateral TAP (left) and rectus sheath (right) blocks, from NYSORA

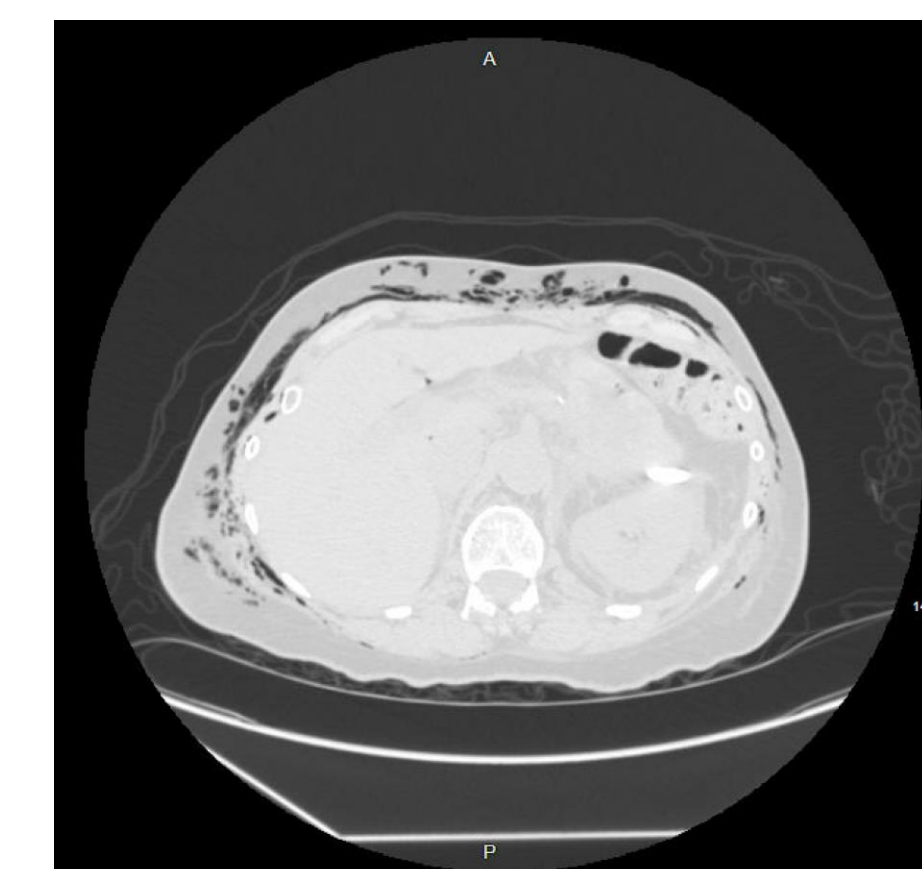


Figure 3: CT images on POD#2 revealing subcutaneous emphysema

Discussion

- Peripheral nerve block timing is often based on logistical considerations such as availability of block team, operating room efficiency, and surgeon preference.
- Current literature does not establish if pre- versus post-operative abdominal wall blocks are superior.
- This case report illustrates a challenge of performing peripheral nerve blocks post-operatively.
- This complication is likely underreported in the current literature.
- More research that examines failed or aborted blocks due to post-operative availability of block team or surgical complications is needed.

References

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