



Block Out the Stress, Abdominally:

Successful Management of a Pediatric Patient with Wilms Tumor and acquired Von Willebrand coagulopathy

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Introduction

- The link between **Wilms tumor** and **von Willebrand Disease (vWD)** in the pediatric population is well established, with various approaches to regional anesthesia described for tumor resection.
- These approaches include **epidural placement** (1), **wound catheters** (2), and **ESP blocks** (3) in pediatric patients undergoing major abdominal surgery.
- We present a novel approach to regional anesthesia in the **coagulopathic** pediatric patient via multilevel rectus sheath block combined with the external oblique block.

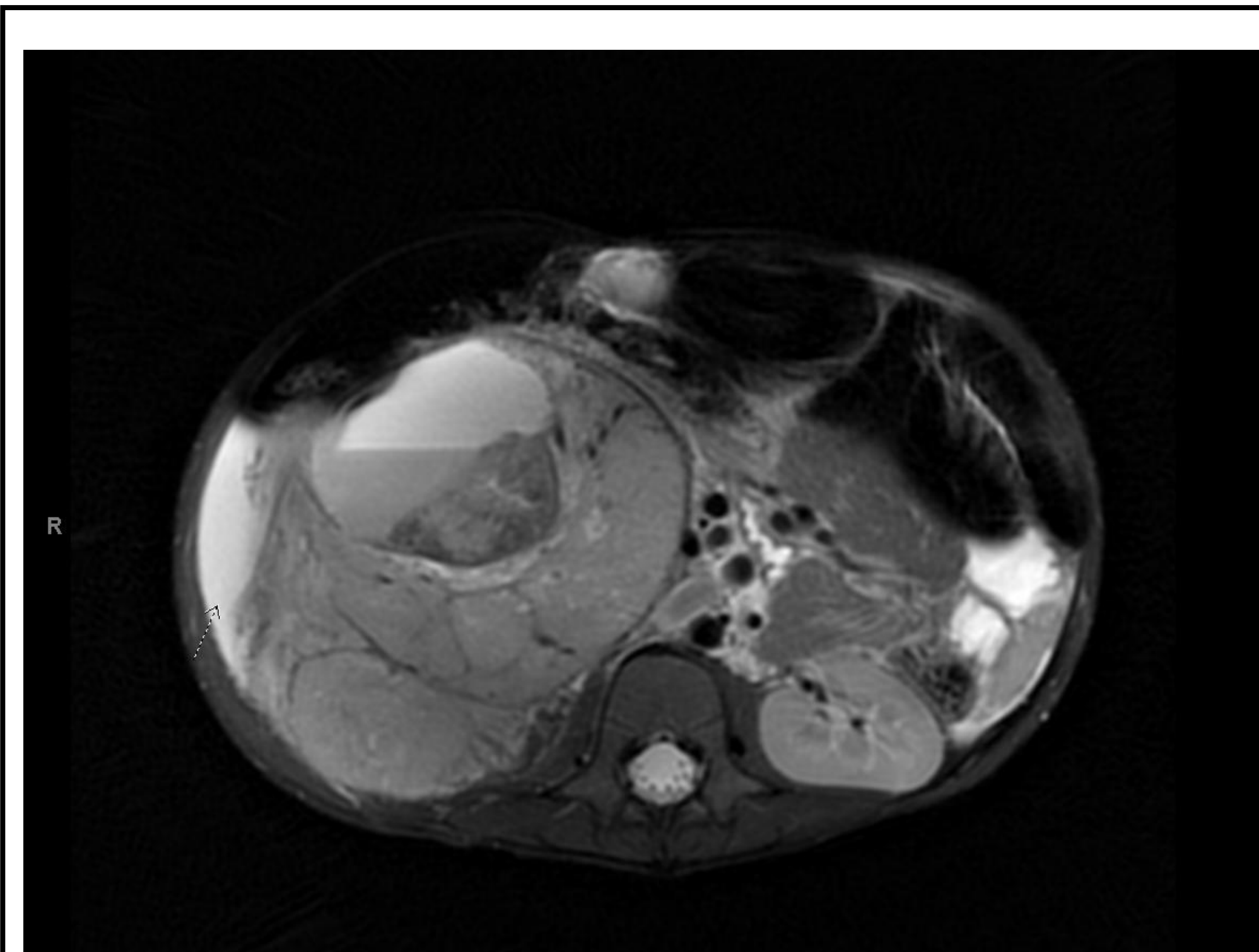


Fig. 1 Abdominal MRI showing Wilms tumor originating from the pole of the right kidney.



Fig. 2 Picture of incision done on patient utilizing **multi-level bilateral Rectus Sheath Blocks** in conjunction with a right-sided external oblique block to cover the extended portion of the incision. Left side of Y shape is the external oblique block.

Case report

A 4-year-old boy at risk for catastrophic bleeding presented with multiple episodes of epistaxis, anemia, and thrombocytopenia in the setting of a large, rapidly growing, abdominal mass, likely a Wilms tumor. The patient was scheduled for tumor resection and hematology was consulted to optimize the patient's coagulation status prior to surgery.

Case report (cont.)

The patient was started on Humate P along with a transfusion goal of Hgb >9 and Plts >100 prior to surgery. On the day of surgery, he was also started on a **Thromboxane (TXA)** bolus and infusion prior to incision. Despite patient's EBL exceeding 100cc/kg during the resection, his coagulation status stabilized by the end of the case.

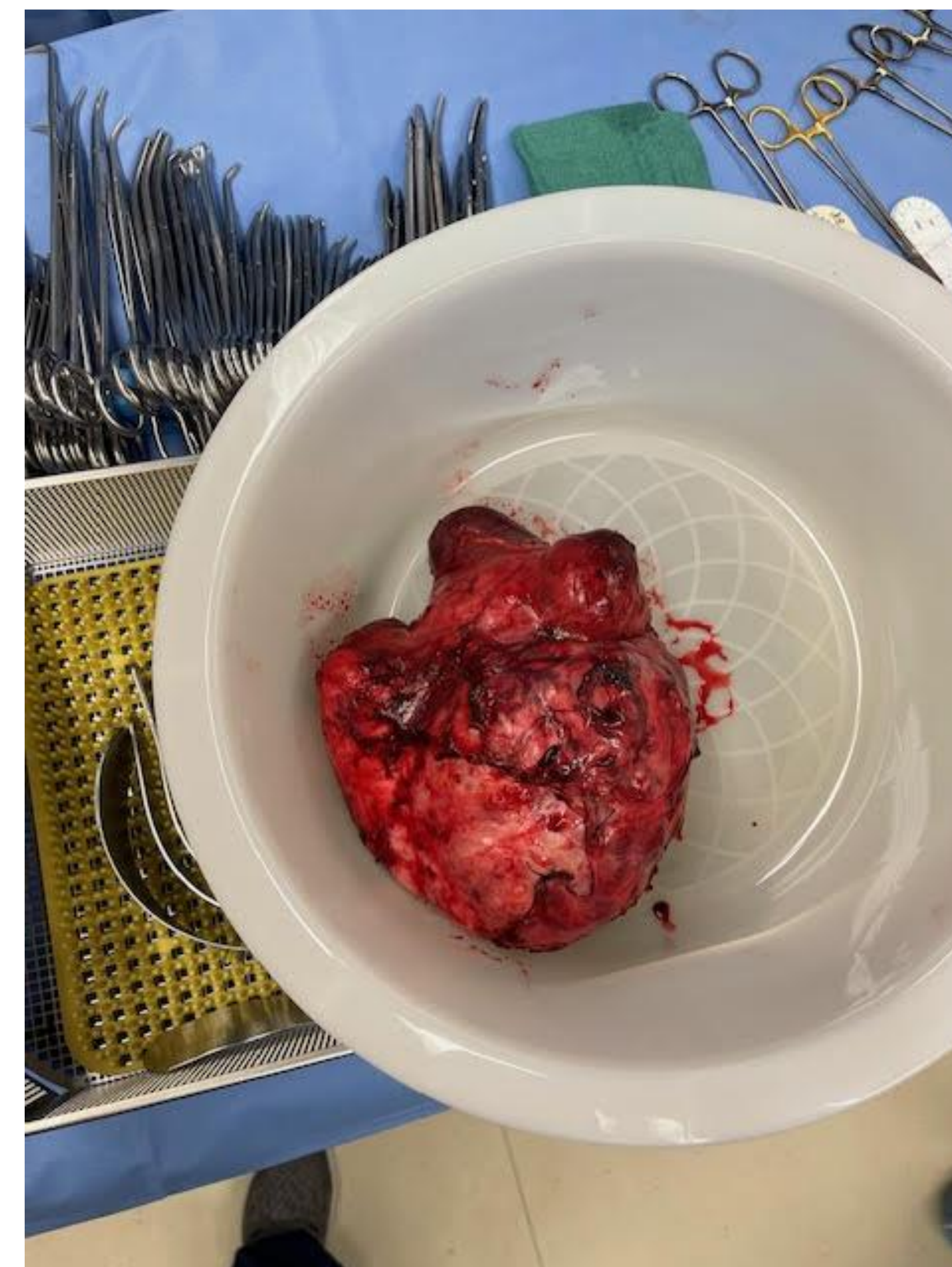


Fig. 3 Picture of tumor removed from the pole of the patient's **right kidney**.

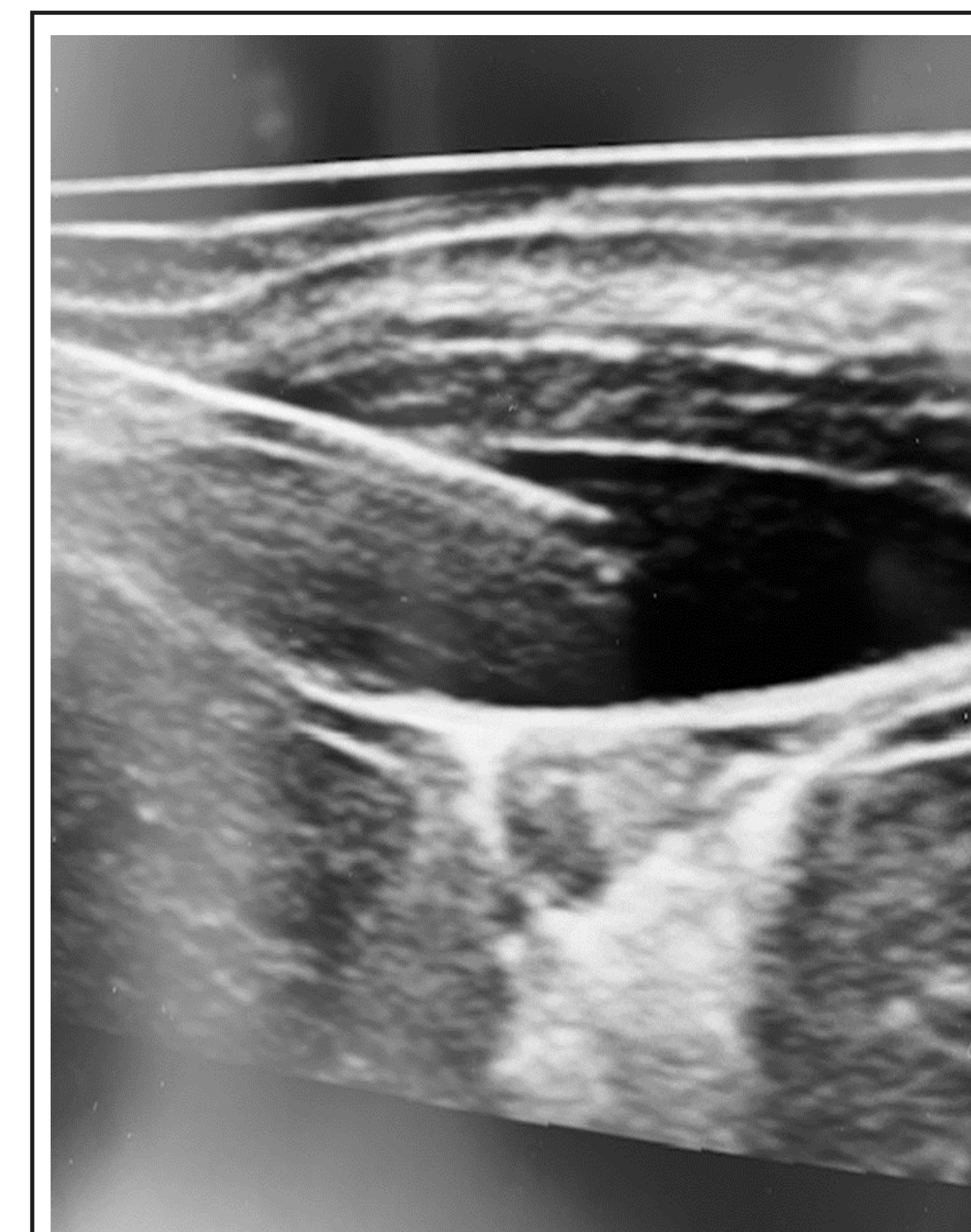


Fig. 4 Abdominal US of **Rectus Sheath Block** showing needle injecting numbing medicine near ab muscle. Black area represents numbing medicine .

We elected to perform multi-level bilateral rectus sheath blocks in conjunction with a right-sided external oblique block to cover the extended portion of the incision, using **45mg ropivacaine** with **16mg dexmedetomidine**. After surgery, the patient was extubated in the operating room and reported "no hurt" in PACU with an observed **FACES** scale: "no pain" at 24 hours.

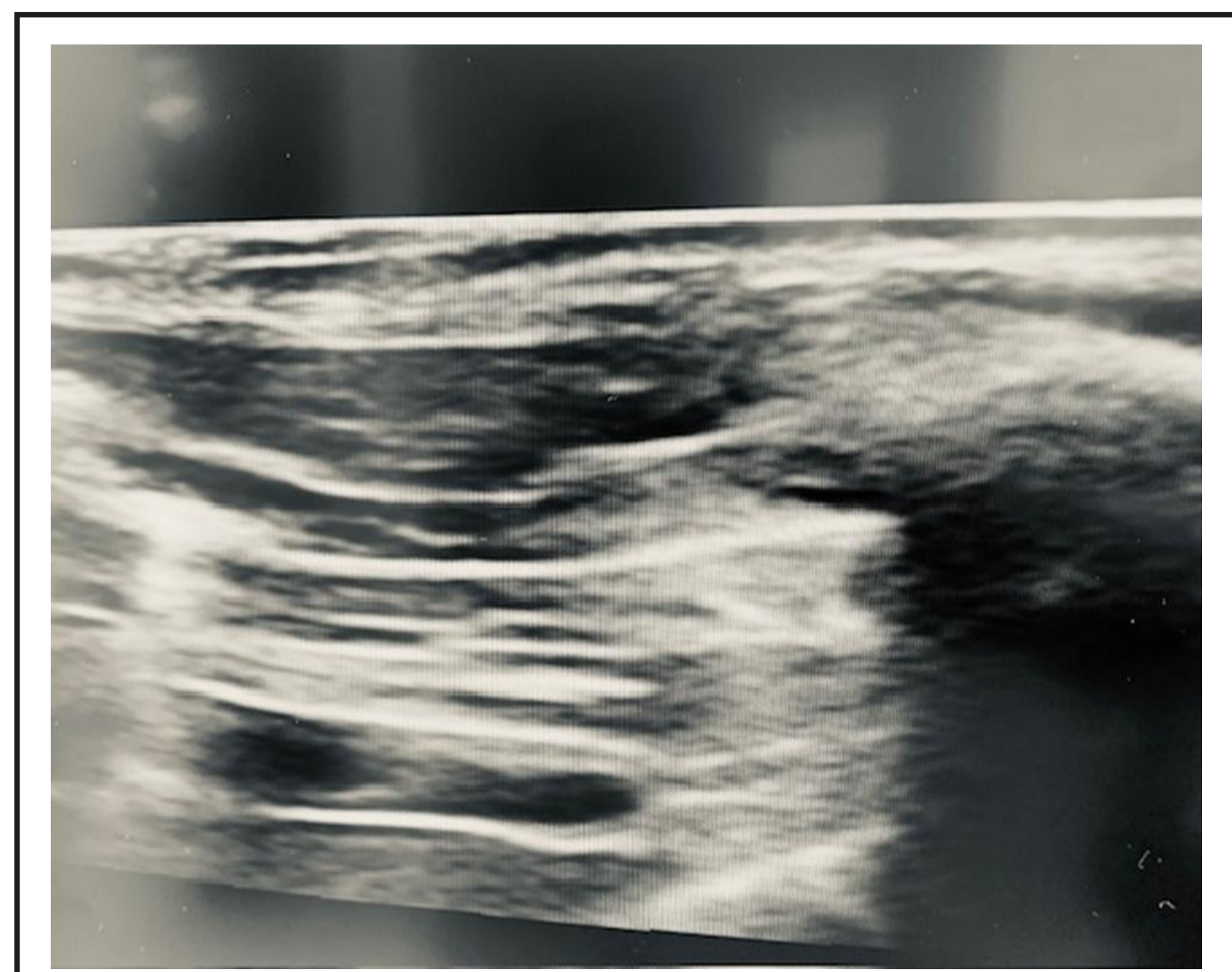


Fig. 5 US image showing **External Oblique Block** with needle injected.

Discussion

In recent literature, few analgesic interventions in the coagulopathic pediatric patient undergoing major abdominal surgery have been described; We provide an additional method, the **external oblique combined with rectus sheath blocks**, to limit the risk of devastating bleed and adequate analgesia provision in this unique population.

References

