Postoperative shock due to abdominal compartment syndrome after massive retroperitoneal bleeding post-renal transplantation and anticoagulation

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BACKGROUND

- ❖ End-stage renal disease (ESRD) and anticoagulation are risk factors for spontaneous bleeding (SB).
- ❖ Retroperitoneal bleeding (RB) is a rare but described manifestation of SB¹.
- ❖ Differential diagnosis of abdominal compartment syndrome (ACS) postoperatively may not be easy.

CASE REPORT

A 69 year-old man with atrial fibrillation, **mechanical mitral valve prosthesis**, and **ESRD** underwent renal transplantation.

Subcutaneous anticoagulation treatment with LMW heparin was restarted on day 3. Two days later, he became anaemic and an angiography showed a **retroperitoneal bleeding (RB)** from two lumbar arteries that were successfully embolised.

Due to hemodynamic instability, he was transferred to the ICU and transfused. After transfusion, haemoglobin and coagulation values were normal but one thrombopathy (maybe uremic) was observed. He required an **increasing IV epinephrine perfusion** with the presence of **severe shock markers**. A **cardiogenic cause** was **discarded** by echocardiography.

12 hours later, he suffered a **cardiorespiratory arrest** in electromechanical dissociation reverting after 15 minutes resuscitation manoeuvres. A **massive retroperitoneal hematoma** displacing abdominal organs was removed through **emergency laparotomy**, improving clinical status and lab values.

An **abdominal compartment syndrome** was identified as the shock's cause.

TC scan image: massive retroperitoneal hematoma which displaced organs like the left kidney

Tromboelastography (ROTEM) at ICU:
MFC in EXTEM <50mm with MFC in FIBTEM >9mm: Platelet dysfunction.

CONCLUSION

- ❖ ACS is easily related to abdominal disorders, triggering shock and organ failure.
- ❖ However, retroperitoneal pathologies may also be the origin.
- ❖ Only a few cases associated ACS to a RB².

In this case, absence of active bleeding forced to conservative treatment. If an ACS had been suspected, early surgery could have avoided one cardiorespiratory arrest.

References:

- ¹ Yamamura, H., Morioka, T., Yamamoto, T., Kaneda, K., Mizobata, Y. Spontaneous retroperitoneal bleeding: a case series. BMC Res Notes. 2014; 7; 659.
- ² Won, D.Y., Kim, S.D., Park, S.C., Moon, I.S., Kim, J. Abdominal compartment syndrome due to Spontaneous retroperitoneal haemorrhage in a patient undergoing anticoagulation. Yonsei Med J. 2011; 52(2):358-361.