Egzulcerated form of adrenal incidentaloma and hemodynamic state of patient

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Pheochromocytomas and paragangliomas (PHEO/PGL) are chromaffin cell tumors that embryonically derive from the neural crest and functionally are capable of production, storage, metabolism, and secretion of catecholamines. About 4-10% of PHEOs are found as adrenal incidentaloma, whereas approximately 5% are diagnosed at surgery. (1)

58 year old patient was admitted to the clinic for abdominal surgery with signs of acute abdomen, intermittent unresponsiveness, abdominal pain and hypertension.

At the admittance the lab. came : hematocrit 0,52, Hgb 142, abdominal ultrasound detected presence of intraabdominal fluid and meteorism, abdominal computed tomography detected unspecific changes of the right adrenal gland. Surgeon called for immediate exploratory laparotomy.

Upon entering the operating room patient collapses, SpO₂ 96%; HR 130/min; TA 245/120 mmHg. After induction of general endotracheal anesthesia central venous catheter (v.jugularis interna) and catheter for invasive measurement of arterial pressure (a.radialis) were placed.

Surgical exploration find exulceration tumor of right adrenal gland-suspicion of pheochromocytoma. Arterial pressure intraoperatively controlled with Urapidil continuous infusion. Before clamping adrenal drainage veins we decreased Sevofluran concentration and discontinued Urapidil infusion all together. Total intraoperative blood loss was 850ml, two units of packed RBCs and two units of FFP were administered.

After tumor removed the patient entered a hemodynamic stable state. Postoperatively patient was awake, aware, hemodynamically and respiratory compensated and placed in ICU at Clinic for anesthesiology and ICU. In consultation with endocrinologist offices endocrinological diagnostics (norepinephrine 705 mcg; epinephrine 108mcg; dopamine 387mcg; VMA 12,3mcg u 24h urine).

Histopathology confirmed pheochromocytoma.

Discussion: Mortality during anesthesia in previously undiagnosed pheochromocytoma patient that was subjected to non-related surgery or surgical procedure is up 50%. (2)

Learning point: The anesthetist should think of incidentaloma in patient with hypertensive crisis, especially because providing hemodynamically stable state is very challenging.

References:

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