EPIDURAL BLOOD PATCH FOR THE TREATMENT OF POST INTRATHECAL CHEMOTHERAPY LIQUOR HYPOTENSION IN A 10-YEAR-OLD

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BACKGROUND

Epidural blood patch (EBP) is a therapeutic procedure used to treat post dura puncture headache and liquor hypotension headache^(1,2). It involves the administration of autologous blood in the epidural space which, through a still not fully explained mechanism, works as a patch of cerebrospinal fluid (CSF) leaks, raising epidural space pressure and causing an inflammatory response that will lead to healing of the leaking spots.

There are some reported cases of the use of this procedure in children, including under general anesthesia (*blind blood patch*)⁽³⁾. Intrathecal (IT) chemotherapy is another increasingly used procedure used in the treatment of some forms of cancer. These procedures involving repeated lumbar punctures (LP), that may form CSF fistula, leading to liquor hypotension and related symptoms.

CASE REPORT

10-year-old female with acute T-cell lymphoblastic leukemia undergoing IT chemotherapy (combined with L-asparaginase and corticotherapy).

- Various unsuccessful LP (no CSF exit);
- Developed complex focal crisis;
- CT scan revealed venous thrombosis of the posterior sagittal sinus;
- Transferred to the Pediatric Intensive Care Unit (PICU) under sedoanalgesia on mechanical ventilation;
- After introducing an intracranial pressure catheter, the patient repeated the CT scan revealing a marked shift of the midline structures and underwent an urgent decompressive craniectomy;
- No improvement in the clinical status;
- Dorsal spine MR myelography revealed a **CSF collection in the epidural space from T4 to the lumbar area with an increase of CSF in the lumbar cistern** (figures 1 and 2);
- A multidisciplinary team decided to perform a **blood patch**;
- Favorable clinical and imagiological evolution in the 24 hours after the procedure.

Figures 1 and 2 – Spinal magnetic resonance: Evidence of extra-dural liquor.

Figures 3 and 4 - Blood patch procedure: injection of autologous venous blood on the epidural space.

- Trained anesthesiologist
- Under proper aseptic conditions
- A Tuohy 20G needle was used to find the epidural space at **L4-L5 level** and injected **8mL of autologous venous blood**, collected from the saphenous vein of the left leg. (Figures 3 and 4)

DISCUSSION

There are no case reports to our knowledge regarding epidural blood patch use in children with LCR hypotension with clinical instability. This case suggests that blind blood patch may be a possibility in similar cases.