ARACHNOIDITIS FOLLOWING EPIDURAL BLOOD PATCH

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INTRODUCTION

Epidural blood patch (EBP) is a common and effective treatment for post-dural puncture headache (PDPH) in obstetrics and is recommended in UK national guidelines [1].
We report a further case of arachnoiditis in a patient having undergone EBP for PDPH following epidural analgesia for labour.

CASE SUMMARY

DAY 1
Induction of labour in a 40-year-old nulliparous woman.
Epidural for labour sited with difficulty.
Inadequate analgesia;epidural subsequently resited.

DAY 5
The patient presented to the maternity assessment unit with symptoms consistent with low pressure headache.
Epidural blood patch successfully and uneventfully performed that same day by two consultant anaesthetists.
Patient discharged home.

DAY 10
The patient re-presented with severe back pain and left sided sciatica.
An urgent lumbar MRI scan was sought, which showed intrathecal haematoma with a subdural collection and marked clumping of the distal cauda equina nerve roots from L4 down, in keeping with arachnoiditis (Figure 1 and 2).
After urgent consults with neurology, neurosurgery and microbiology, the patient was commenced on IV linezolid.

DAY 14
The patient's symptoms were greatly improved and she was discharged home with oral analgesics and oral linezolid.

WEEK 6 (DAY 42)
Outpatient review noted that the patient had mild residual symptoms and a repeat MRI showed only mild persistent clumping at L5.

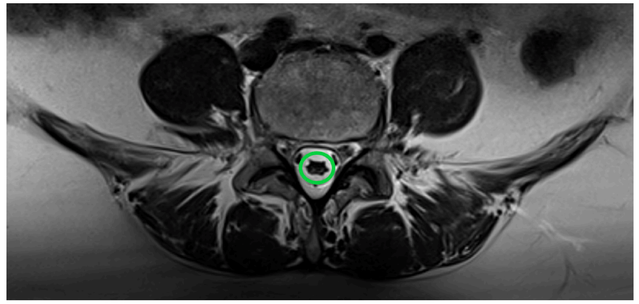


FIGURE 1: Axial T2-weighted image at the level of the L4 vertebra demonstrates clumping of the cauda equina nerve roots (green circle), suggestive of arachnoiditis.

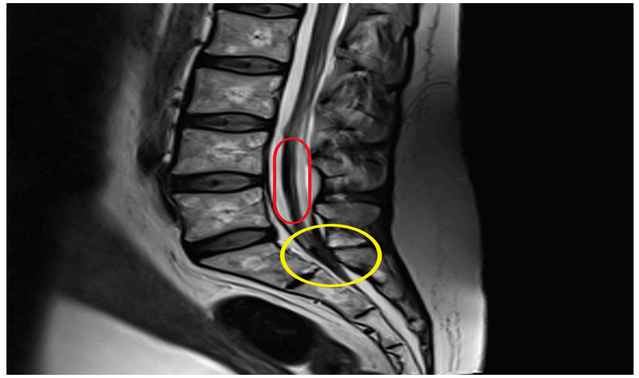


FIGURE 2: Sagittal T2-weighted image of the lumbosacral spine demonstrates clumping of the cauda equina nerve roots (red circle), suggestive of arachnoidtis; and low T2 signal change within the distal thecal sac suggestive of haemorrhage (yellow circle).

DISCUSSION

A recent case report and literature review described seven further cases of arachnoiditis following EBP for PDPH in obstetric patients [2].
The cause of the arachnoiditis is presumed (as in this case) to be inadvertent intrathecal injection of autologous blood causing inflammation of the nerve roots though direct transfer of epidural blood accross the dural breech is also possible. Management strategies include antibiotics, intravenous steroids and analgesia, though no consensus exists. Outcomes range from complete resolution after 24hrs to long-term, debilitating neurological sequelae.

Arachnoiditis is a rare but serious complication of EBP. Patients may present with an array of symptoms including severe back pain and radicular pain, headache, parasthesiae and motor weakness.
Awareness of the potential complication will allow for early recognition and treatment. Unfortunately, it is not yet clear what measures can be deployed to reduce the risk of arachnoiditis following EBP.

REFERENCES

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