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Visual Case Discussion

About an accidental retention of a foreign body in the skull of a new born with huge encephalocele

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Case presentation

A 33-year-old pregnant female with an ante-natal diagnosis of a fetus with a large occipital encephalocele presented to her gyneco obstetrician. To allow for a normal delivery, the obstetrician did an ultrasound guided needle puncture of the encephalocele. During the procedure, uterine contractures occurred and the needle broke, followed by the migration and retention of distal part of the needle in the skull cavity. An emergency caesarean section was done resulting in the delivery of a female newborn with APGARS of 3 at the first minute and 7 at the fifth minute. The birth weight was 3950 g; the height is 53 cm and the cranial perimeter of 38 cm. The infant had a large occipital encephalocele almost the same size as the newborn's head.

Imaging including x-rays, CT scan and CT angiography were done to determine the exact location of the foreign body in the brain (Figs. 1 and 2).

Fig. 1. Crane simple X ray showing the projection of the foreign body (yellow arrow)

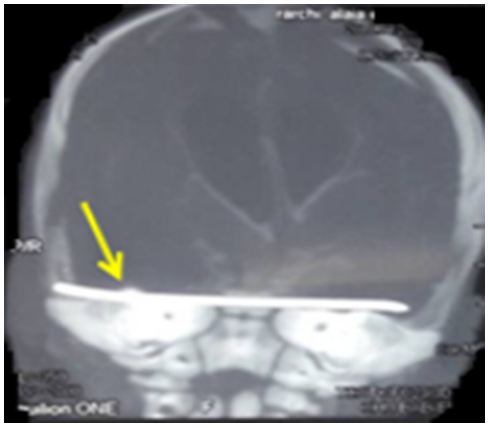

Fig. 2. Angio CT scan showing the foreign body in the skull base (yellow arrow)

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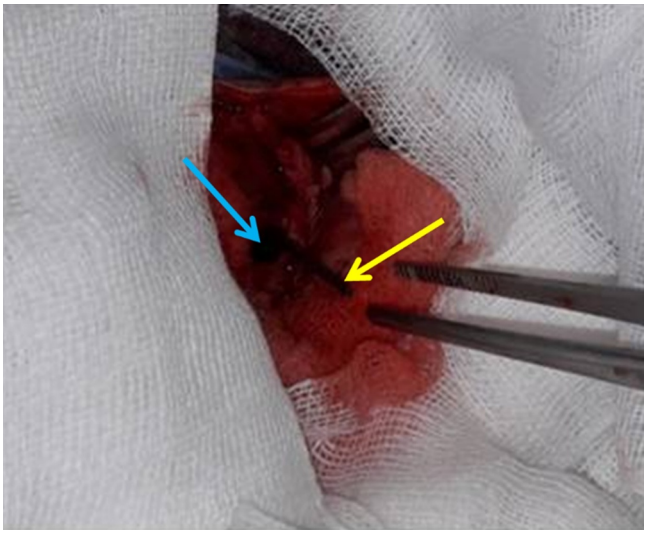

Fig. 3. Surgical view of the foreign body extraction; dural opening (blue arrow), extraction of the needle (yellow arrow)

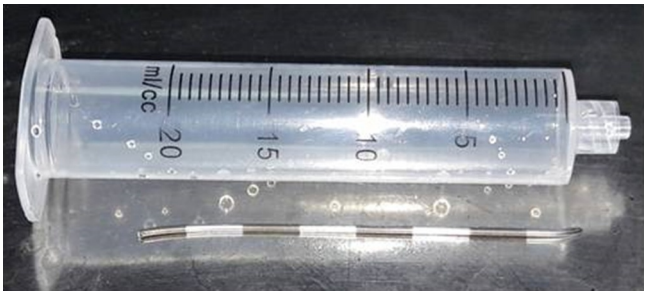

Fig. 4. The removed foreign body (yellow arrow)

Neurosurgery was consulted and it was advised to start the patient on cefotaxime and gentamycin. One week later, the infant began having seizures which were managed with phenobarbital. The patient's clinical status further worsened with the development of meningitis. A right temporal craniotomy was performed which allowed for the extraction of the puncture needle. The foreign body's length was 10 cm (Figs. 3 and 4). The post-operative follow-up was uneventful. There were no seizures and the sutures were removed at 10 days post-surgery.

Conflict of interest

None.

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.visj.2018.12.003.

Questions

1. Are intra cranial foreign bodies always symptomatic?
   a. False
   b. True

2. Is intraoperative catheter angiography (IOA) helpful in the assessment of intracranial foreign body?
   a. False
   b. True

3. Is there indication for neurosurgical emergency in case of intra cranial needles?
   a. False
   b. True

Answers

1. False. Explanation: There are many reports of sewing needles and other foreign objects retained in the brain for long periods of time without symptoms (1).

2. True. Explanation: IOA would have particular help for visualization of the ischemic region on the cortical surface and determination of appropriate recipient vessel for arterial anastomosis (2).

3. False. Explanation: The first thing is to assess the location of the foreign body to organize the surgery; Also patients with intracranial needles may present late in life with epilepsy or status epilepticus. Surgical intervention may be unnecessary if seizures are under control with antiepileptic drug therapy (3).