

Liver Laceration A Very Rare Form Of Birth Trauma: A Case Report

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Abstract

A case of haemoperitoneum in a neonate secondary to liver laceration following birth trauma is presented. The neonate was in a state of shock. The patient required an exploratory laparotomy & did very well postoperatively. It is a very rare form of birth trauma following assisted vaginal breech delivery.

CASE

A 36 weeks gestation baby was delivered at a district health facility by assisted breech delivery with grade 2 meconium & APGAR score 3, 4 & 7. After initial resuscitation & subsequent nasotracheal intubation baby was referred to neonatal unit at our hospital.

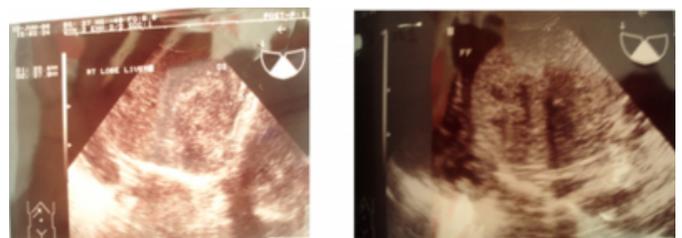
On examination the baby was 2.28 kg wt, pink in colour, no obvious congenital anomalies, swollen & decreased movement of left upper limb, right cephal haematoma, mild oozing from mouth from torn frenulum & considerable bruising noticed around the body. Radiological examination revealed fracture left clavicle. Patients Hgb was-14.gm/dl, WBC- $40.3 \times 10^3/\mu\text{l}$, PLT- $115 \times 10^3/\mu\text{l}$

Fourteen hours after admission to baby developed sudden pallor, was noted to be very lethargic with mild to moderate abdominal distension. Intra abdominal bleeding was suspected, baby was then electively ventilated by endotracheal tube, an urgent USS was done & referred to Paediatric Surgery. Hgb was then 5.7gm /dl, PLT- $71 \times 10^3/\mu\text{l}$, WBC- $24.5 \times 10^3/\mu\text{l}$

USS of abdomen revealed 2.7cm x 2.3cm x2.3cm heterogeneous lesion noted in the posterior segments of right lobe of liver with free fluid in pelvis & around the liver. Diagnostic peritoneal aspiration revealed haemoperitoneum. Informed consent was obtained from parents & an emergency exploratory laparotomy was performed-due to sudden & severe decompensation –findings were :50ml blood around the liver, with a 2.5cm x 2cm sub-capsular hematoma on the inferior surface of right lobe of liver, the rest of abdominal findings were normal. The liver was

packed with gel foam.

Figure 1



USS: Shows sub-capsular haematoma
USS: Showing free fluid in pelvis

Of right lobe of liver

Pre-op total bilirubin level rose to 39mg/dl but it became normal after 2 units exchange transfusion in the post operative period.

With the treatment baby settled well, started to bottle feed, further complete neurological examination at discharge were normal. Patient had a repeat USS at 2 weeks & at 6 weeks post op - by that time the liver haematoma had completely resolved. The patient was last seen at our clinic at age 2yrs with having normal growth & development.

DISCUSSION

Birth injuries to the newborn as a result of traction, mechanical forces during birth process are sometimes seen. [2.3.4.] the incidence of birth injuries is 6-8 cases in 1000 live births. The common types of birth injuries are CNS trauma, extra-cranial or intracranial haematoma, nerve palsies, fractures of limb bones and haematoma in solid

abdominal organs.

We present here a rare case of birth injury where the liver was traumatized by assisted breech delivery associated with fracture left clavicle & cephal haematoma. There is no documentation of using forceps.

Complications of breech delivery: of fetus --are intracranial haemorrhage, dislocation of neck, Erb-Duchenne paralysis, torticollis, ruptured intra-abdominal viscus, cephal haematoma, fracture clavicle humerus & shoulder dislocation, cord prolapse, hip dislocation, femur fracture, knee joint disruption.

Abnormal fetal presentation, extremes of fetal size or neurological immaturity may complicate the birth process and the intrapartum forces may lead to tissue damage, oedema, haemorrhage or fracture in the neonate. [2.3.4.]

This case is a unique example of such a rare event. Multiple risk factors, i.e., oligohydramnios and breech presentation, abnormal or excessive traction during delivery of the baby, seem to be present in this case, acting together to create a situation to precipitate the injury.

Intra-abdominal birth injuries are rare and involve rupture or sub-capsular haemorrhage into the liver, spleen or adrenal gland. Most of these injuries are self-limiting; however, they require close monitoring and follow up. Rarely, they can complicate in hemo-peritoneum and may indicate surgical

intervention. [2.3.4.5.6.7.]. This is a very rare presentation, where haemoperitoneum secondary to liver laceration has occurred following a breech delivery and being treated successfully. It is very important that paediatric surgeon should be involved in the management as early as possible, as we were able to do so, in this case.

So far two cases have been reported, both of them are haemophilic [1.] but ours' is a true rare form of birth trauma without any history or findings of any haematological abnormalities.

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