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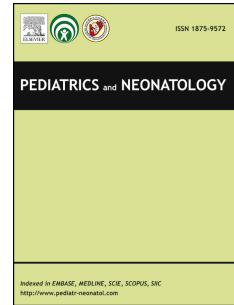
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An umbilical venous catheter (UVC) was introduced to a 1853-g, preterm neonate suffering from hemolytic icterus, and its position was checked radiologically (Fig. 1A). At 60 h of life, a blood transfusion was administered because of a drop in hematocrit from 42%, at birth, to 25%. The baby was in good condition; however, a slight oliguria was noted on Day 6, suddenly followed by apnea, bradycardia, and marked hypotension. Hematocrit dropped to 14% and cardiopulmonary resuscitation was performed without any recovery.

The postmortem radiological examination, performed by ultrasound, Computed tomography (CT), and Magnetic resonance imaging (MRI), indicated the presence of a 51 × 11-mm subcapsular hematoma extending along the upper-anterior edge of the liver, where there was a small capsular laceration. An intraparenchymal 2.5-mm nodular-like area with irregular edges was observed next to the vascular pedicle, shown as hyperechogenic by ultrasound, dishomogeneously hypodense by CT, and dishomogeneous iso-intense by MRI in both the T1 and T2 weighted sequences, with some hyperintense gaps.

Postmortem examination revealed 21 ml of free abdominal blood and a hepatic subcapsular hematoma on both the hepatic lobes (Figs. 1B-C) that broadened deeply into the parenchyma (Fig. 1D). Tip of the UVC was inside the liver (Fig. 1E).

Histological examination confirmed a subcapsular hematoma with capsular laceration (Fig. 1F) and an intraparenchymal hemorrhagic collection with interruption of the wall of an intrahepatic vein.

The use of UVC is essential in neonatal care.¹⁻² Because of the risk of ominous complications because of inappropriate placement, knowledge of proper pathway and tip localization is imperative.¹⁻³ The inferior vena cava/right atrium confluence is a preferred position for the tip of the catheter. A fairly common but inappropriate position is in the umbilical vein recess

from which half or more of the injected fluid is likely to enter the portal system and the catheter may migrate into the liver.³ A UVC near midline and straight on a frontal radiograph is not reassuring. A lateral radiograph is imperative in this common, and even dramatic, error.³

Figure 1 – The umbilical venous catheter checked radiologically (A). The hepatic subcapsular hematoma (white arrows B–C) and an intraparenchymal hemorrhagic collection with the tip (red arrow in F) of the umbilical catheter inside the liver. Subcapsular hematoma (black arrows) extending along the upper-anterior edge of the liver (D). Intraparenchymal 2.5-mm nodular-like area with irregular edges, dishomogeneously iso-intense by MRI in both the T1 and T2 weighted sequences, with some hyperintense gaps (E). Microscopic evidence (G) of the subcapsular hematoma with capsular laceration (circle); black arrows depict the course of the umbilical catheter.

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