

Case-Based Diagnosis Training

Patient:

Gender: *Male*

Age: *34 years old*

Clinical history and working diagnosis on the referral:

Patient was referred on for CT evaluation due to abdominal pain and worsening pancreatic function tests.

Normal variant:

He had a story of neurocognitive dysfunction and epileptic seizures treated with poly-therapy.

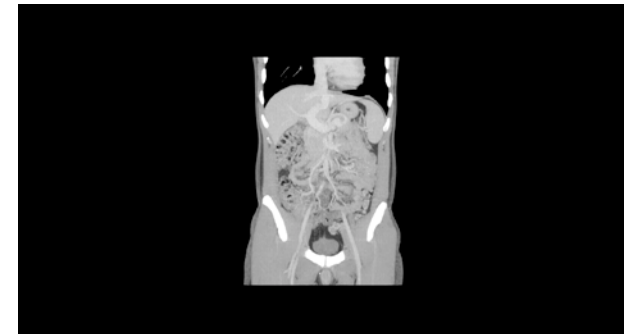
Submitted by:

A. Posteraro

Please add pictures (radiograph, ultrasound, CT or MR images) and schematic drawing of the developmental process *if applicable* by clicking on the symbols within the boxes below:

| Laboratory tests | Values | Normal range |
|----------------------------------|--------|--------------|
| ALBUMIN | 3.4 | 3.5-5 |
| GAMMA-GLUTAMINTRANFERASE (U/L) | 16 | 0-60 |
| TOTAL BILIRUBIN (mg/dl) | 4.4 | 0.1-1.1 |
| INTERNATIONAL NORMALIZED RATIO | 1.38 | 0.86-1.14 |
| ASPARTATE AMINOTRANSFERASE (U/l) | 23 | 0-40 |
| ALANINE AMINOTRANSFERASE (U/l) | 11 | 0-40 |
| LIPASES (U/L) | 68 | 0-50 |

Picture 1: Laboratory values



Picture 2: CT coronal section on portal phase

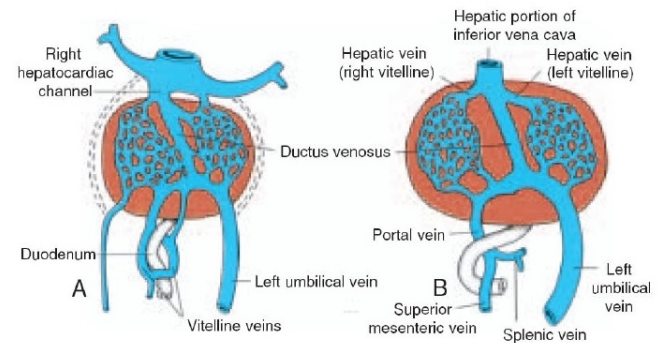
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Additional information

In case you want to submit further pictures, please add these (radiograph, ultrasound, CT or MR images) and schematic drawing of the developmental process *if applicable* by clicking on the symbols within the boxes below:

Underlying step in embryological development:

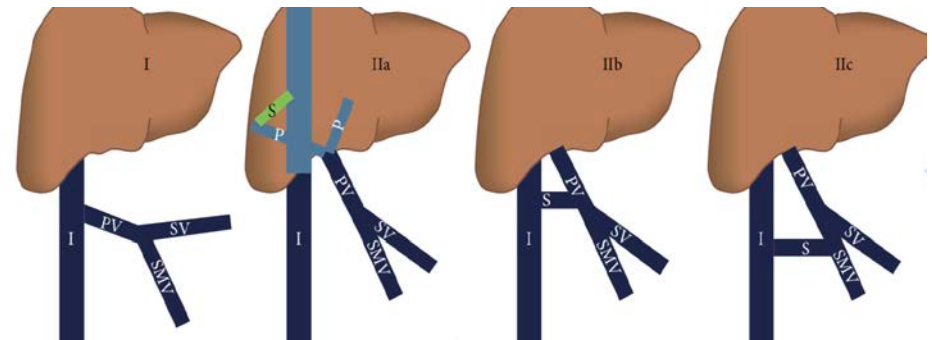
Development of vitelline and umbilical veins in the second (A) and third months. Note formation of ductus venosus, portal vein, and hepatic portion of inferior vena cava. The splenic and superior mesenteric veins enter the portal vein.



Potential differential diagnostic entities:

Type 1: there is complete diversion of portal blood into the systemic circulation (end-to-side shunt), with absent intrahepatic portal branches.

Type 2: intrahepatic portal vein is intact, but some of the portal flow is diverted into a systemic vein through a side-to-side shunt.



Schematic diagram showing various types of CEPS. I: IVC, P: portal vein branches, PV: portal vein, S: shunt, SMV: superior mesenteric vein, and SV: splenic vein.

Picture 4:

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Additional pictures

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Picture 5: MRI coronal section demonstrating type 1 portosystemic shunt.



Picture 6: MRI axial section demonstrating type 1 portosystemic shunt.



Picture 7: Pre-operative venogram: Aranzio's duct is dilatated.



Picture 8: CT scan after surgical duct ligation.