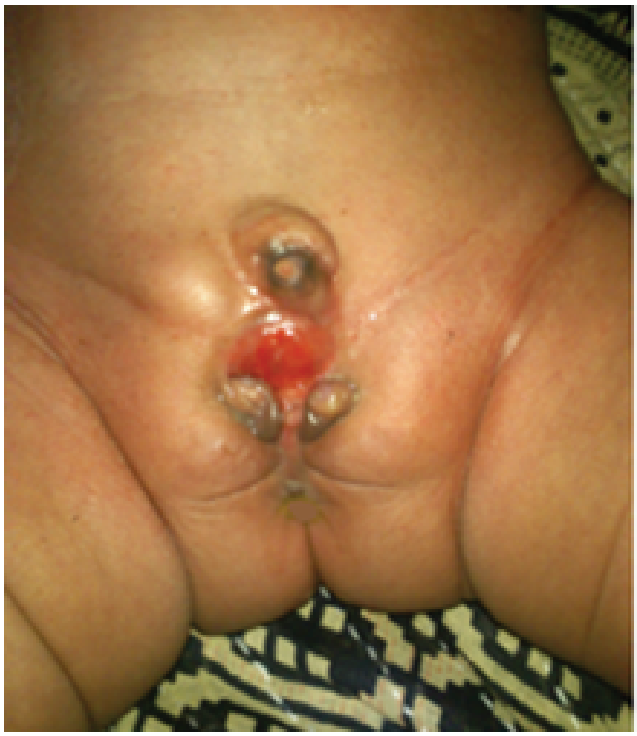


Figure-1: Female baby with bladder exstrophy; case:1

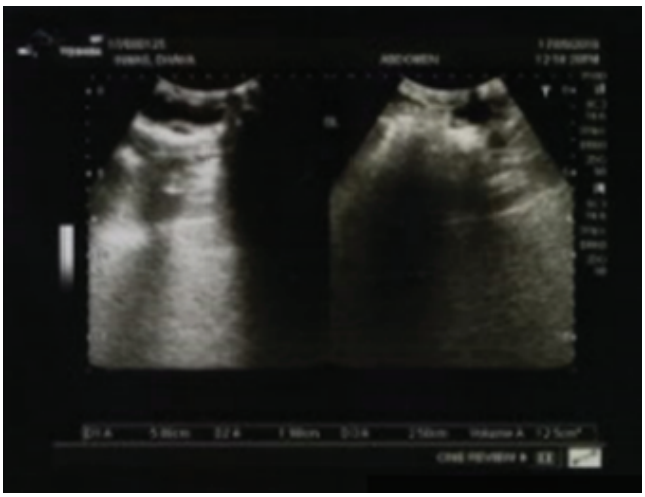


Figure 2: Post operative follow up of case-1 showing a small urinary bladder in lower abdomen on right and PVR on left.

Case report-2:

A 5 months old male child was referred to us with a soft tissue mass in the lower abdomen which was protruding through a wall defect. On physical examination the baby had a defect in the lower anterior abdominal wall, in the midline. Through it the reddish rounded, soft tissue mass of about 2 X 3 cm could be seen. Umbilicus was seen just above the mass. The penis was small, rounded with the urethral opening in the anterior aspect. The scrotums and the anus were seen more anterior than their usual position. Both the legs were outwardly rotated and placed wide apart. The baby was scanned with a 3.5 and 7 MHz ultrasound probe of a Toshiba nemio-30 USG scanner. The urinary bladder could not be visualized. Trace irregular collection was seen in the lower abdomen. All the other abdominal organs were normal in size with uniform echo pattern. Scan over the mass showed poor passage of echoes. The pubic bones seemed to be wide apart.

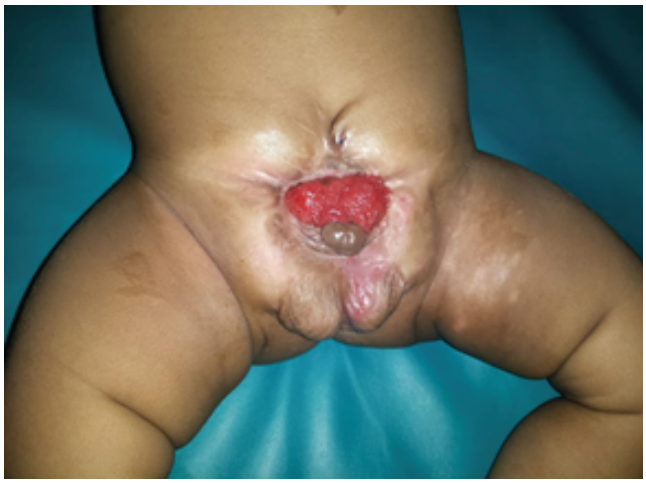


Figure 2: Male baby with bladder exstrophy; case:2

Case report-3:

A 21-year-old female came to us with a soft tissue mass protruding from the lower abdomen, which was present since birth. She lacked umbilicus and the external genitalia was high up in position. She complained of urgency in recent past with gradual increase in size of the swelling along with difficulty in micturition which included frequency and sometimes inability to micturate in sitting condition. On physical examination she had a swelling over the lower anterior abdominal wall, in the midline. It swelled with the rise of intra-abdominal pressure and decreased in size while lying down like a hernia sac. Anterior abdominal wall muscle or tendons

beneath the skin seemed to be absent on examination. The vulva is placed above its normal position, just below the swelling. She had displaced vagina, bifid clitoris, divergent labia and an anteriorly placed anus. Pubic bones could not be felt over the mons pubis. She was scanned with a 3.5 and 7 MHz ultrasound probe of a Toshiba nemio-30 USG scanner. The urinary bladder was very small and could not be separated from the overlying loose skin corresponding to the visible swelling outside. All the other abdominal organs, including uterus and both the ovaries, were normal in size with uniform echo pattern. She was diagnosed as a case of bladder exstrophy with a skin tag over it.

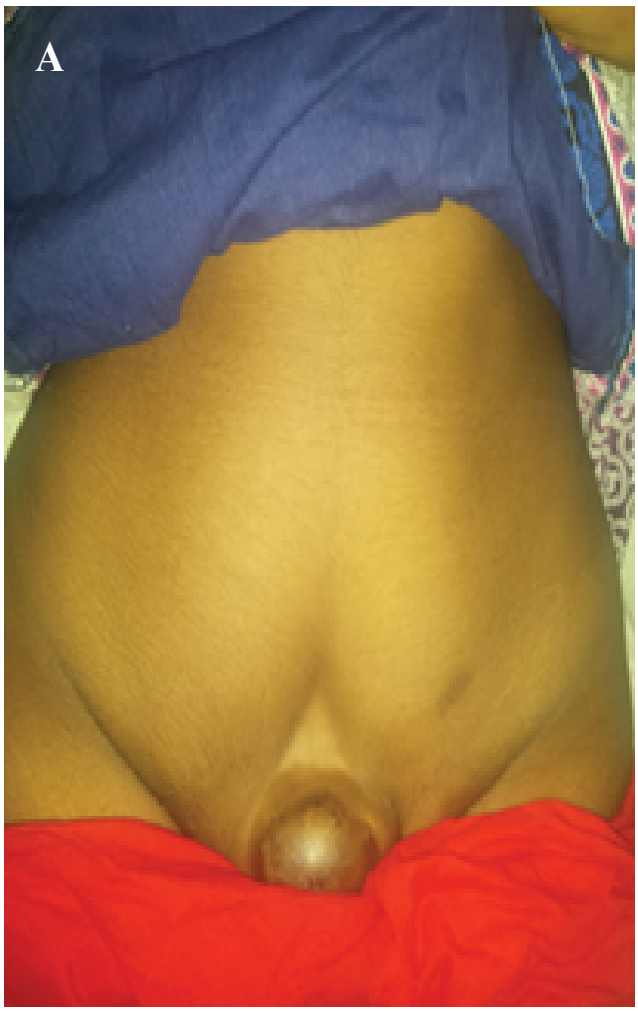


Figure 3: Young female baby with bladder exstrophy; case:3

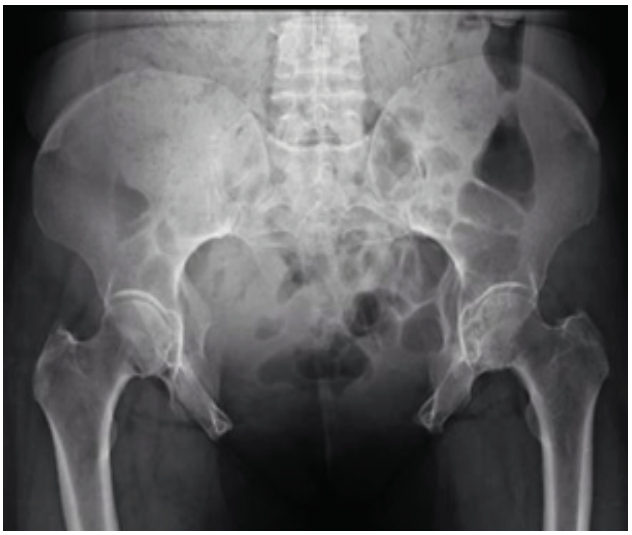
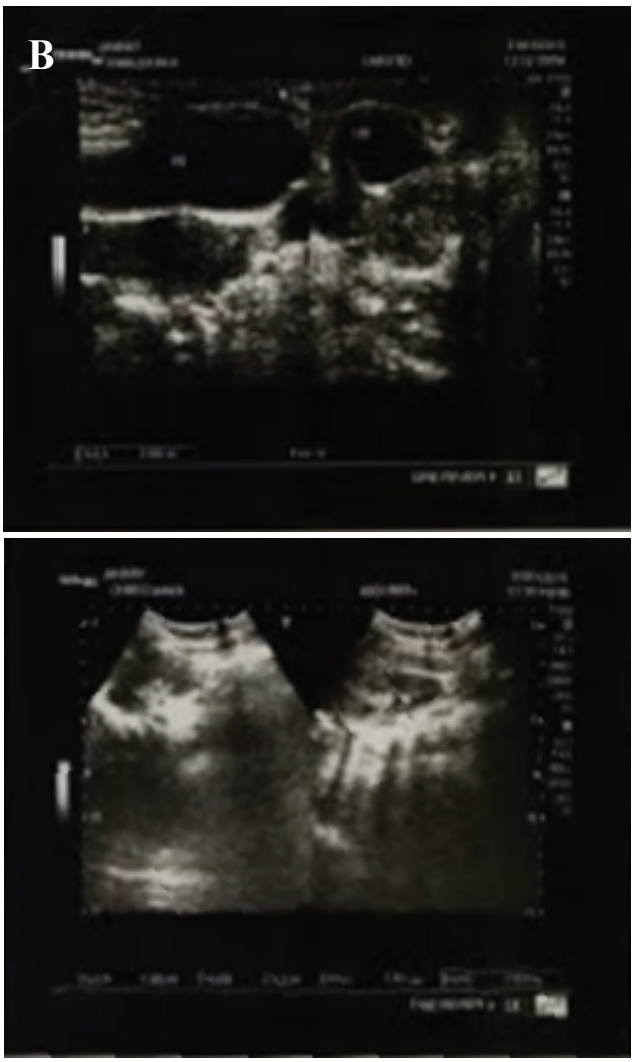


Figure 4: X-ray showing absent pubic bones in case:3



B- USG showing elongated area containing urine, just below the skin in case 3 and normal kidneys.

DISCUSSION

Bladder exstrophy is a rare congenital anomaly and occurs more in male babies with a male and female ratio of 2.3-6:1 (4, 5, 6). The cause of this anomaly is unknown. It begins in early fetal life and abnormal development of the cloacal membrane is noted. Developmental anomaly may be present in urinary, genital or intestinal tracts, as well as in the musculoskeletal system.

Features include

- Anterior abdominal wall defect.
- The bladder and other structures exposed on the outer surface of the body.
- Epispadias
- displacement of the bely button, usually immediately above the defect and lower than normal on the abdominal wall

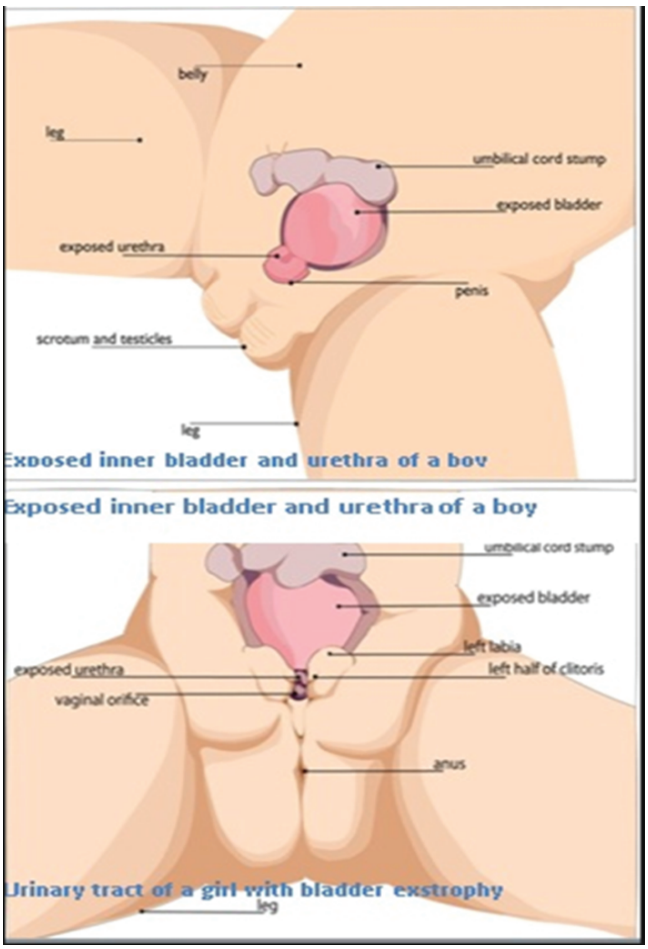


Figure 5: External features of bladder exstrophy

- narrow vaginal opening, wide-spread labia and short urethra in girls
- anteriorly placed anus
- separation of pubic symphysis, shortening of the pubic rami
- outwardly rotated legs and feet
- in male-shorter penis and chordae
- In female- displaced and narrowed vaginal orifice, bifid clitoris and divergent labia (7).

In neonates, exstrophy of bladder can be diagnosed by clinical examination. A baseline renal function tests should be done before the complex reconstruction of the urinary tract.

Spinal USG, radiography and MRI is done to exclude myelodysplasias or vertebral anomalies. (7). Renal ultrasound is practiced to exclude any renal abnormality like renal agenesis, hydronephrosis and ectopic kidneys. An early assessment by examination under anesthesia should be carried out in a center experienced with the condition.

The goals of surgery are to close the bony pelvic ring, close the bladder, posterior urethra and close the anterior abdominal wall defect and reconstruct the genitalia. In the first year of life, the bladder is closed following osteotomy of both iliac bones just lateral to SI joints. Later reconstruction of bladder neck and sphincter is done (8). After bladder reconstruction, ultrasound is done to look for upper urinary tract deterioration which may result from increased bladder pressure or repeated infection. Complications of closure is the failure to reach adequate capacity and thus augmentation or reconstruction may be necessary (8). Another option is urinary diversion, if continence is poor following bladder reconstruction. This can be done by ureter sigmoid anastomosis or formation of ileal conduit, colonic conduit or continent urinary diversion (8, 9, 10). Complications include stricture at the site of anastomosis, increased chances of adenomas and

adenocarcinomas at the site of ureterocolic anastomosis (10), and hyperchloremic acidosis.

At the beginning of this century two thirds of the children with bladder exstrophy died in the second decade of life (3). Nowadays these children reach childbearing age and improvement of surgical techniques in women born with this abnormality has made child bearing possible (1, 10). In men, semen can nowadays be obtained through microsurgical epididymal sperm aspiration and subsequent artificial insemination may lead to production of offspring. Ultrasound scan can guide the physician from a very early stage that may be life changing for the patient.

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Diagnosis and Monitoring of Neonatal Periventricular Leukomalacia by Ultrasonography: A Case Report

Sharmin Ferdous[1], Jahan Nafisa[2], Jahan Nusrat[1], Hossain Sabbir [3]

We present a case of periventricular leukomalacia in a newborn baby aged 40 days.

Ultrasound diagnosis was based on cranial ultrasound through the fontanelles, showing multiple cystic lesions or hallow places in brain parenchyma. Though, patient has positive history in favour of the diagnosis, medical ultrasonography plays as a vital tool of diagnosis.

Keywords: Periventricular leukomalacia, periventricular infarction, brain Injury, newborn, softening of the brain, Ischemic necrosis.

Periventricular Leukomalacia is an acquired of brain parenchyma of newborns and young infants (1), affecting mostly premature, underweight babies. It is the second most common acquired nervous system complication (1) of newborns. It's a type of neonatal hypoxic-ischemic injury of brain parenchyma (7). The exact etiology of periventricular leukomalacia is unknown (1). White matter of brain tissue is prone to breakdown, when those area around the lateral ventricles are lack of blood due to any cause –may trigger the disease. Periventricular leukomalacia leads several physical and mental disability specially intellectual and motor disability.

CASE REPORT

A primi mother came with her 40 days old baby for cranial ultrasonography, referred by a senior pediatrician. The baby had a history of 7 days fever with convulsion and was recovered at present. Now the complaint was deformed shape of head after fever. The fore head had gradual depression with prominent skull lining. The family background was very poor. There was no history of antenatal care. Mother was suffered from an episode of fever but hadn't any medical care. There was no drug history, neither any family congenial or acquired disability history in either sides. They tried for normal vaginal delivery at home and after prolong trial caesarian section was done at local sador hospital. On ultrasonography, there was dilated lateral ventricles with several cystic or hallow spaces in brain parenchyma (Figure 1).

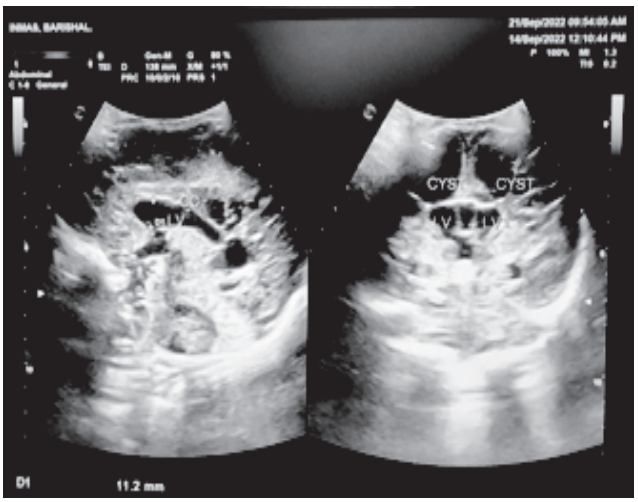

Figure 1: Showing cranial USG of Premature Infant

Right figure shows: Left sagittal image showing dilated lateral ventricle with cavitation on periventricular areas.

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or cystic areas with ventriculomegaly throughout both right and left cerebral areas (Figure 2).

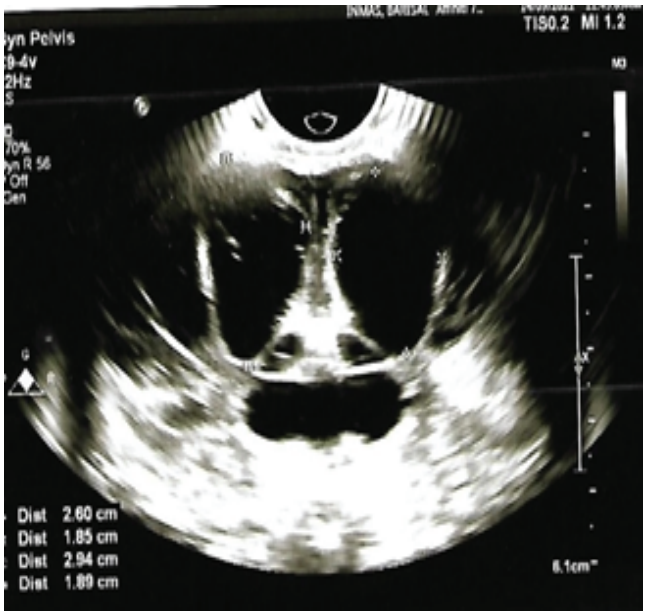

Figure 2: Showing cranial cavitation

Figure shows: Posterior coronal image demonstrates extensive cavitation or cystic areas throughout both right and left cerebral areas.

DISCUSSION

Every year about 15 million babies are born prematurely, incidence are quite high in developing and undeveloped countries. Among them, about 1/3rd of the babies develop brain injury. Periventricular Leukomalacia is one of the most common type of acquired brain injury, more particularly white matter surrounding the lateral ventricles (2). Mostly premature babies with low birth weight are prone to this condition but less commonly fetuses also can be affected. Male and female ratio does not differ in incidence. Etiology is unclear but if there is any trigger that causes the lack of blood supply of brain tissue causes narcosis or insult of white matter. White matter is prone to break, trigger several sequence of events and the newborn likely be suffered in this condition.

Fetal distress, prolong maternal trail or caesarian section may causes hypoxia of brain, makes new one to more vulnerable. Premature neonates are also prone to infections, leads encephalopathy. All those conditions leads to hypoxia to developing brain.

Those incidences may cause ischemia, damage of blood brain barrier. Body response to the process with set events of sequences (6) which further damage the developing brain with free radicles.

Early diagnosis is necessary. Survivors suffer from minor to several disability in long run, depends on extends to tissue damage. Specially developmental delay , motor impairment and intellectual disability. Periventricular leukomalacia also plays a vital role for cerebral palsy and many suffer from epilepsy lifelong. Prevention is better than treatment in this case, mostly done by preventing or delay of premature birth to avoid low birth weight babies.

CONCLUSION

Periventricular Leukomalacia is an injury of brain parenchyma, that may develop before, during or after birth. It is one of the most common (4) incidence in underweight, premature born. Though it is frequent in incidence, it is vital to diagnosis as many survivors develop several chronic conditions, like cerebral palsy, motor dysfunction, intellectual impairment, visual disturbance, etc (5). Medical ultrasonography plays as primary hallmark tool for diagnosis.

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Portal Vein thrombus in Hepatocellular Carcinoma: An Interesting Case Report

Tanvirul Hasan[1], B. K. Bose[2], Mariom Nusrat[1], Md. Nazmul Islam[3], Md. Tasneem Alam[4], Kanta Roy Rimi[5]

Portal vein thrombus (PVT) is a more common known complication in hepatocellular carcinoma (HCC) patients than that in cirrhotic liver patients. Sonological assessment of PVT and correlating it with the significant rise of α- fetoprotein (AFP) play a major role in helping the clinicians to plan the further management of the patient and to predict the prognosis of the disease. Our case report is regarding the sonological detection and assesment of a portal vein tumour thrombus in a patient with left lobe liver mass which later came out to be a case of progressive HCC after correlation with other investigation findings.

Keywords: Portal vein thrombus, Hepatocellular carcinoma, α- fetoprotein, Ultrasonography.

Direct invasion by or metastatic deposit of the primary malignant tissues into the vessels, particularly the veins, is known as tumour thrombus. They are commonly found in renal cell carcinoma (RCC), hepatocellular carcinoma (HCC), Wilms' Tumour, adrenal cortical carcinoma, retroperitoneal tumours, and rarely in transitional cell carcinoma (TCC) of renal pelvis (1). Ultrasonography has great importance in such cases to detect tumour thrombus & to differentiate it from a 'bland' (free from any neoplastic cells) one (2).

CASE REPORT

A 38 years aged young non-diabetic and normotensive man who was a native resident of Dinajpur district of Bangladesh, had recently developed complaints of marked weight loss, severe anorexia, epigastric lump, abdominal pain and melena. Clinically he was afebrile, conscious and well oriented but a cachectic man. Physical examination revealed that he was anaemic, mildly icteric, with no features of oedema but with finger clubbing. On abdominal examination the palpable, hard, partially mobile epigastric mass was non-tender, not well outlined and was moving along with respiration. We did transabdominal ultrasound by a curvilinear transducer of lower frequency (1- 5 MHz; Philips Affiniti 70G ultrasound machine) and found an exophytic mixed echogenic left lobe hepatic mass measuring about 7.3 X 6.4 cm (Figure 1 A & 2), which corresponded with the clinically palpable epigastric mass. The mass appeared to be continuous with the portal vein (PV) at its confluence extending up to right and left branches (Figure 1B). The dense echogenic solid thrombotic mass in the expanded part of portal vein (Figure 3 & 4) showed increased flow pattern in & around the mass on Doppler (Figure 5). Rest of the hepatic parenchyma appeared to be a bit non-uniform tissue echopattern. Spleen was found enlarged (~ 14.7 X 5.5 cm) with uniform tissue echotexture (Figure 6). Gall bladder, common bile duct, intra-hepatic biliary tree all were found normal in ultrasound. No mass lesion or any other sonological abnormality was found in the pancreas especially head.

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