

examination one should keep in mind possible changes which may mimic thoracic aortic injury, among others thymic residual tissue, "ductus bump" or mediastinal hemorrhage of different etiology. ATAI is associated with high mortality, which is directly dependent on the time from injury to implementation of treatment. The seemingly good condition of patient should not influence the range of examination or the rapidity of diagnostic imaging.

ETIOLOGY, CLINICAL MANIFESTATION AND RADIOLOGICAL FINDINGS IN CEREBRAL VENOUS AND SINUS THROMBOSIS

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Introduction. Cerebral venous sinus thrombosis (CVST) is a rare disease with a variety of symptoms, diagnosed primarily in imaging studies, which allows early introduction of proper, causal treatment. The aim of this study is to analyze the epidemiological and clinical data and the results of imaging studies performed in patients diagnosed with this disease.

Material and method. The analysed material consisted of a group of 16 patients (11 women and 5 men) who were examined with CT and MRI at the Department of Radiology and Diagnostic Imaging of the Regional Hospital No. 2 by the name of St. Jadwiga the Queen, in Rzeszów in the period from October 2000 to October 2012, and who were diagnosed with CVST. At least one of the following imaging examination was performed in these patients: head CT scan with or without intravenous contrast administration, CT angiography of the head, head MRI with intravenous contrast agent, MR venography.

Results. CVST occurred most often in women in two age groups: 20-29 and 40-49 years old. The most common risk factor were inflammatory lesions of the head and neck, and slightly less frequent in the women group oral contraceptives and puerperium. In six (i.e. 37.5%) patients co-existence of at least 2 risk factors was observed. Thrombotic lesions more often localized in large, paired sinuses. In the majority of patients, i.e. in 13 patients (81.25%), blood clots were observed in multiple locations. The greater number of risk factors was associated with a more extensive range of DVT. In eight patients changes in the sinuses and cerebral veins were associated with various changes in the brain tissue. The level of D-dimers in CVST may be normal. The diagnosis was usually made on the basis of CT angiography examination, and in the second place on the basis of MR venography.

Conclusions. CVST is most common in young women. The most common risk factor is inflammation and puerperium is the condition especially predisposing to parenchymal changes in the brain. Large sinuses are the most common locations for thrombosis. The shorter the

duration of clinical symptoms and the more severe their presentation, the more extensive concurrent brain parenchyma changes. The correct level of D-dimers does not exclude the presence of CVST. CT angiography and MR venography are the most sensitive methods for detecting CVST, while MRI with contrast is the most sensitive method to detect parenchymal changes in the brain.

ASSESSMENT OF CORRESPONDENCE OF ULTRASONOGRAPHIC AND ENDOSCOPIC FINDINGS IN SELECTED PATHOLOGIES OF UPPER AND LOWER GASTROINTESTINAL TRACT

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Background. Transabdominal ultrasound is usually the primary diagnostic procedure for the evaluation of abdominal cavity, most often parenchymal organs. The development of ultrasound imaging techniques now allows initial assessment of gastrointestinal tract. Although endoscopy and histological assessment are the final diagnostic tools in recognizing gastrointestinal tract pathologies, the sonography may be a useful element of diagnosing and monitoring patients.

The purpose of the study was to demonstrate that ultrasound is helpful in recognizing the selected pathologies of gastrointestinal tract, furthermore to compare the localization of pathological findings in ultrasound and endoscopy as well as to assess concurrent extra – intestinal changes.

Material and methods. We retrospectively analyzed 110 transabdominal ultrasound exams of 106 patients with symptoms suggesting gastrointestinal tract abnormality. Patients were hospitalized in Provincial Hospital No 2 in Rzeszów, in the period from July 2009 to March 2010. All the patients underwent in addition endoscopy examinations – gastroscopy was performed in 85 patients and colonoscopy in 100 patients. Exam data (upper and lower gastrointestinal tract separately) was analyzed and compared. For the assessment of ultrasound accuracy in recognizing and localizing inflammatory and malignant changes sensitivity, specificity, positive and negative predictive value were calculated.

Results. The most frequent finding within gastrointestinal tract was thickening of the gastrointestinal tract wall – greater for malignant changes. Morphology of the wall changes and extra-intestinal findings allowed for initial differential diagnosis.

Sensitivity of ultrasonography in detecting inflammatory changes of the upper gastrointestinal tract was much lower than in the lower gastrointestinal tract (14% vs 98%), sensitivity in detecting malignancies of the upper and lower gastrointestinal tract were comparable (89% and 94%). The comparison of pathology localization in ultrasound and endoscopic examinations showed that US was the most accurate in detecting changes of sigmoid colon whereas abnormalities localized in the rectum, the duodenum and the stomach were diagnosed much more infrequently.

Conclusions: The ultrasound examination of gastrointestinal tract is a useful tool for localization of abnormalities, allows the initial differential diagnosis, assessment of local expanse of the disease and detection of other abdominal complications.

USUFULNESS OF ULTRASOUND EXAMINATION IN DIAGNOSIS OF NECROTIZING ENTEROCOLITIS

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Background. Necrotising enterocolitis (NEC) is one of the most serious disorders of the gastrointestinal tract in the neonatal period. If there is a clinical suspicion of NEC, early diagnosis and adequate treatment are essential. Plain abdominal radiography is the current modality of choice for the initial evaluation of gastrointestinal tract in neonates, however, when the diagnosis is unclear abdominal sonography with bowel assessment might be an important complementary study. The aim of the study was the evaluation of usefulness of the ultrasound examinations in diagnosis of NEC and their value for implementation of proper treatment.

Material and methods. In retrospective analysis the data of nine neonates hospitalized in Provincial Hospital No.2 in Rzeszów, in the period from September 2009 to April 2013 with recognized NEC were analyzed. Apart from the abdominal radiography in all nine cases the abdominal ultrasound with bowel assessment was performed. Images findings, epidemiological data, co-existing risk factors and course of disease were assessed.

Results. Most children in the assessed group were preterm infants. Images findings in plain abdominal radiography were normal or nonspecific. In all ultrasound examinations findings of wider spectrum were observed and pneumatosis intestinalis which is pathognomonic sign in NEC was recognized more often than in plain abdominal radiography. The treatment of most of the children was surgical intervention with resection of necrotic bowel loops and in more than half of the cases the localization of changes during surgery was complementary with findings in ultrasound examinations.

Conclusions. Abdominal ultrasound examination might be helpful in recognizing NEC especially when the plain abdominal radiography findings do not correlate with clinical changes although abdominal radiography is still recognized as the modality of choice. The range of morphological changes which can be detected on ultrasound is much wider than in plain abdominal radiography. The ultrasound examination allows to assess the stage of changes within intestines and adjacent tissues more accurately which is helpful for clinicians to make therapeutical decisions more accurate and easier and allows for implementation of proper treatment.

CHARACTERISTICS AND DISTINCTIVENESS OF MULTIPLE SCLEROSIS IN CHILDREN IN MAGNETIC RESONANCE IMAGING

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Background. Multiple sclerosis (MS) in children is a demyelinating disease of a central nervous system (CNS), which clinical symptoms and results of imaging examinations differ from those found in adults, and therefore requires different criteria of diagnosis. The chosen method of MS imaging in children is magnetic resonance imaging (MRI). The purpose of the thesis was to present the characteristics of pediatric MS in MRI brain scan.

Materials and methods. MRI brain scans of 20 children aged 11-17 with diagnosed MS were analysed. The compliance of MRI brain scans with KIDMUS criteria from 2008 was stated along with the location and morphology of plaques of demyelination.

Results. In the examined group all three KIDMUS criteria were met by 45% of children required for MS diagnosis, two criteria by 50% of children. The average size of the demyelination plaque was 9mm. Major foci were not stated. 95% of lesions were located in circumventricular white matter, 40% of lesions in brainstem, 25% in cerebellum and 5% in thalamus.

Conclusions. The image of changes in MRI brain scan in children presents a wide array of differences, the greater cognition of which is indispensable in order to diagnose properly and therefore to implement the suitable treatment. It is particularly crucial in this age group due to an early progression of disability.

DIAGNOSTIC IMAGING AND PROBLEMS OF SCHIZENCEPHALY

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Background. Schizencephaly is a rare developmental malformation of the central nervous system associated with cell migration disturbances. Schizencephaly can be uni or bilateral and is divided into two morphological types. The