cleft is defined as type I ("closed lips") if there are fused clefts in cerebral mantle. In type II ("opened lips") the clefts are separated and filled with cerebrospinal connecting lateral ventricle with the subarachnoid space.

Material and methods. We retrospectively analysed data of patients hospitalized in the Clinical Pediatric Neurology Department of Hospital No 2 in Rzeszów between1998 – 2011. Clinical data and imaging exams were analysed in the group of children with confirmed schizencephaly.

Results. Schizencephaly was recognized in 32 children. Diagnosis was made in children in the ages between 2 weeks and 15 years – the majority of older children were born before the year 2000. Diagnostic imaging, most often magnetic resonance imaging was performed in all of the children. In most cases coexistence of other CSN malformations was discovered. In only one patient there were no neurological symptoms, most of the children presented different developmental disorders and neurological symptoms – most often cerebral palsy and epilepsy. In the group of children with bilateral and type II schizencephaly certain symptoms occurred more often.

Conclusions. Schizencephaly is a rare central nervous system developmental disorder, which is very often associated with other severe brain malformations and in most of the cases subsequent multiple neurological symptoms. The method of choice in diagnosis of schizencephaly is magnetic resonance, which shows the degree and type of cleft, coexisting abnormalities and allows differential diagnosis. With the increased availability of this method it is possible to recognize schizencephaly more often and earlier.

DIAGNOSTICS OF BILIARY DILATATION BY MEANS OF MAGNETIC RESONANCE CHOLANGIOPANCREATOGRAPHY

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Background. Magnetic resonance cholangiopancreatography is a relatively non-invasive imaging technique of biliary and pancreatic ducts. In MRCP technique heavily T2-weighted pulse sequences are used, in which the bile appears of high signal intensity, whilst surrounding tissues are of reduced signal intensity.

The purpose of the thesis was to evaluate the diagnostic value of magnetic resonance cholangiopancreatography in diagnostics of biliary dilatation causes.

Materials and methods. MRCP examinations of 148 patients (48 men and 100 women; the average age was 56) performed on Achieva Philips device of a magnet strength 1.5 Tesla in Provincial Hospital in Rzeszów within the period form November 2011 to April 2013 were submitted to retrospective analysis. The examined group was divided into three subgroups: patients after cholecystectomy, patients with cholecystolithiasis and patients without concrements in the gallbladder. The final reason for biliary dilatation was mainly determined on the basis of MRCP and ECPW examinations, in individual cases after intraoperative cholangiography and laparatomy.

Results. Signal losses assumed as concrements were stated in 34 cases. Mostly (in 45%) the cause of biliary dilatation was cholelithiasis in the group of patients with cholecystolithiasis. The image in MRCP examination was typical in 4 cases out of 9 malignant causes. Mostly (20%) the cause of biliary dilatation was neoplasm in the group of patients without gallstones in the gallbladder. Benign causes of biliary dilatation, apart from cholelithiasis, were stated in 16 individuals, including 4 cases in which the diagnosis was identified in MRCP, whereas in the remaining 12 cases in the final diagnosis ECPW examination turned out to be definite.

Conclusions. Magnetic resonance cholangiopancreatography enables reliable imaging of causes of biliary dilatation as long as these are deposits in the gallbladder and tumors. In cases of benign causes of biliary dilatation apart from cholelithiasis, MRCP images are often unusual and therefore the final specification of the cause of biliary dilatation is possible when this imagining method is combined with ECPW examination and additional tests.

CLINICAL AND MORPHOLOGICAL ASPECTS OF GRAY MATTER HETEROTOPIA TYPE DEVELOPMENTAL MALFORMATIONS

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Background. Grey matter heterotopia (GMH) is a malformation of the central nervous system characterized by interruption of normal neuroblasts migration between 7th and 16th week of fetal development.

The aim of the study was analysis of clinical symptoms, prevalence rate and the commonest concurrent central nervous system (CNS) developmental disorders as well as assessment of characteristic morphological changes of gray matter heterotopia in children hospitalized in our institution between the year 2001 and 2012.

Materials and methods. We made a retrospective analysis of patients' data, who were hospitalized in our institution between the year 2001 and 2012. We assessed clinical data and imaging exams in children diagnosed with grey matter heterotopia confirmed in MRI (magnetic resonance imaging).

Results. GMH occurred in 26 children hospitalized in our institution between the year 2001 and 2012. Among children with grey matter heterotopia most common clinical symptoms were: epilepsy, intellectual disability and hemiparesis.

The commonest location of heterotopic gray matter were fronto-parietal areas of brain parenchyma, mostly subependymal region.

Grey matter heterotopia occurred with other developmental disorders of central nervous system rather than solely and in most cases it was bilateral.

Schizencephaly and abnormalities of the corpus callosum were the most often developmental disorders accompanying GMH.

Conclusions. 1. Subependymal grey matter heterotopia was more common than subcortical GMH. Subependymal GMH showed tendency to localize in the region of lateral ventricles bodies. The least common was laminar GMH. 2. Grey matter heterotopia occurred more often with other developmental disorders of central nervous system rather than solely. The most often concurrent disorders of central nervous system were: schizencephaly, developmental abnormalities of the corpus callosum, arachnoid cyst, abnormalities of the septum pellucidum and the fornix. 3. GMH foci were more often bilateral than unilateral. 4. In the diagnosis of cell migration abnormalities, grey matter heterotopia included, MR imaging remains method of choice.

CLEAR-CELL KIDNEY SARCOMA AND NEPHROBLASTOMATOSIS AS A RELATIVELY RARE CHILDHOOD KIDNEY TUMORS — OWN EXPERIENCE

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Aim. The aim of our study was to present two cases of less common renal tumors in children.

Material and methods. Two cases were presented: a case of 20-month-old boy with renal clear-cell sarcoma, and a 2-month-old boy with polycystic kidney disease, who was also diagnosed with comorbid outbreak of nephroblastomatosis.

Results. Tumors of the kidney, other than fetal nephroblastoma (Wilms' tumors) occur in children relatively rarely. These include, among others: nephroblastoma mesoblasticum, nephrobalastomic syndrome, muscular rhabdomyosarcoma tumor and renal clear-cell sarcoma.

Conclusion. The image of small changes is usually not a characteristic, while in the case of large tumors there exists a syndrome of the morphological characteristics in the computer tomography and magnetic resonance images, suggesting the diagnosis of a specific type of tumor. Further development of modern imaging techniques will allow more accurate diagnoses, that allow for better planning of the scope of the surgery, because of its completeness has a significant effect of reducing the risk of local recurrence and improves long-term prognosis in young patients.

RATHKE'S CLEFT CYST IN OUR OWN MATERIAL – DIAGNOSTIC DIFFICULTIES IN MAGNETIC RESONANCE IMAGING

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Rathke's cleft cyst (RCC) is a non – neoplastic cyst arising from the embryologic remnants of epithelial Rathke's.

The aim of the study was to present differential diagnosis for cystic lesions of the pituitary gland.

Materials and methods. We retrospectively analysed MRI images of Rathke's cleft cysts in 29 patients.

Results. Diagnostic imaging, in particular MRI imaging is currently considered the modality of choice and plays an essential role in the diagnosis as well as preoperative assesment of sellar and parasellar tumors. The main differential diagnosis of RCC are: cystic craniopharyngiomas, cystic pituitary adenomas, pars intermedia cysts as well as epidermoid, dermoid and arachnoid cysts.

Conclusions. Preoperative differential diagnosis of cystic sellar and suprasellar tumors is important for neurosurgeons for choosing method of treatment. The MRI assessment of cysts considering solely intrinsic fluid signal may be difficult if not impossible. The finding of nodules within the cyst with characteristic signal intensity in T1- and T2-weighted images and no contrast enhancement may implicate diagnosis of Rathke's cleft cyst.

THE ORTHOPEDIST COMES TO RADIOLOGIST – SCOLIOSIS YESTERDAY AND NOWADAYS

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Aim. The aim of this report was the presentation of up-to-date and interdisciplinary approach to the problem of scoliosis in children and presentation of a still very important and leading role of X-ray examinations in its diagnosis.

Material and methods. The analysis of childrens' X-rays in the ages between 5 and 18 was made, who were examined in the Clinical Department of Radiology in Provincial Hospital No 2 in Rzeszów in the period between January the 1st 2015 and March 31st 2015, with suspected or diagnosed scoliosis (354 children). All of the children had an X-ray examination of the whole vertebral column in two basic projections (AP and lateral), whereas in children qualified for surgical treatment additional projections, supplementary to initial X-rays as well as CT and/or MRI were performed.

Results. X-ray examination still remains the basic diagnostic imaging in diagnosis of scoliosis, it allows among others to evaluate the grade of scoliosis based on Cobb's angle measurement and to qualify the patients to the proper treatment. In case of children with high grade scoliosis CT and MRI are additionally made before the surgery.