CNS INFECTIONS

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FORMA INFANTO-JUVENIL DA MIELOPATIA ASSOCIADA AO HTLV-1/ PARAPARESIA ESPÁSTICA TROPICAL (HAM / TSP): SEGUIMENTO CLÍNICO EM UMA COORTE DE 10 ANOS

Janeusa Rita Chagas[1], Mariana Azevedo Bastos[2], Maria Fátima de Oliveira[3], Maria Lourdes Farré[2], Achiléa Cândida Lisboa Bittencourt[3], José Lucas Sena da Silva[3]. [1] Universidade Federal da Bahia, Brazil; [2]Laboratório de Patologia Experimental, Centro de Pesquisas Gonçalo Moniz, Fundação Oswaldo Cruz, Brasil; [3]Universidade Federal da Bahia, Brasil

No Brasil, 1,35% da população é portadora do vírus linfotrópico para células T humanas tipo 1 (HTLV-1) que causa, dentre outras doenças, a dermatite infecciosa associada ao HTLV-1 (DIH) e a paraparesia espástica tropical/mielopatia associada ao HTLV-1 (HAM/TSP). HAM/TSP é forma grave de paraparesia espástica progressiva com envolvimento vesical e sensitivo já bem descrita em adultos. Contudo, há na literatura relatos na faixa etária infanto-juvenil, onde a maior casuística é brasileira ocorrendo associada a DIH. Em estudo de coorte, durante 10 anos, foram acompanhados, 27 portadores de HAM/TSP com e sem DIH. Todos foram diagnosticados conforme critérios pré-estabelecidos (OMS) incluindo as escalas de avaliação funcional dos diversos sistemas e da incapacidade motora.

Resultados: 16/27 (59,2%) eram portadores de HAM/TSP/DIH, 4 (18,5%) de HAM/TSP sem DIH, 3 (7,5%) de HAM/TSP provável sem DIH e 4 (14,8%) de HAM/TSP provável com DIH. Predominou o gênero feminino(63%). Em todos, a via de infecção foi vertical, provavelmente, pela amamentação. A idade de início da HAM/TSP/DIH teve mediana de 10 anos [9–13] anos e taxa de progressão de 0 a 1,5 pontos. Nos casos com HAM/TSP sem DIH, a mediana da idade de início foi 17 [6-20,5] anos e a taxa de progressão variou de 0 a 1 ponto. Observou-se que HAM/TSP na faixa infanto-juvenil é rapidamente progressiva em relação à do adulto. Pacientes com mielopatia e/ou eczema grave em áreas endêmicas devem realizar sorologia para o HTLV-1, considerando que o diagnóstico e o tratamento precoces podem conduzir a uma melhor qualidade de vida.

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DENGUE WITH NEUROLOGICAL COMPLICATIONS OF DIFFICULT DIAGNOSIS IN PEDIATRIC PATIENT- A CASE REPORT

Francisco Manoel Guedes Nobre, Talita De Lima Aquino Nogueira, Ana Neyla Martins Da Mota, Regina Coeli Carvalho Porto Carneiro, Virgianne Alves Ferreira. Acadêmica de Medicina da Universidade Federal Do Ceará, Brazil

INTRODUCTION: Dengue is the frequent human arboviral infection, with 50 million cases per year, according to 0MS, it can present as dengue fever (DC), a self-limiting disease, as dengue hemorrhagic fever (FHD), or as a syndrome dengue shock (SCD).

CASE REPORT: A 8 years and 10 months old patient, male, he was born in Sobral - Ceará, he had petechiae all over the body, nausea, vomiting, fever and severe headache. In seven days the patient developed seizures, decreased level of consciousness and respiratory failure, which required mechanical ventilatory support. With hypothesis of bacterial meningoencephalitis started empirically with ceftriaxone, unsuccessfully. Two cerebrospinal fluid analysis incompatible with bacterial infection. Cranial computed tomography without contrast identified hypodense lesion in the angular gyrus of the right parietal region being interrogated encephalitis. Postulated herpetic viral meningoencephalitis and was treated with acyclovir and anticonvulsants with slow and progressive improvement. After positive IgM serology for dengue, the conclusion was dengue with neurological complications. He was discharged with the use of oxcarbazepine and clobazam.

DISCUSSION: Neurological manifestations can arise in acute dengue as headache, restlessness and irritability, and rarely respiratory depression, seizures and lowering of consciousness occur. The latter are often attributed to other CNS disorders and so many other diagnoses are suspected, making diagnosis difficult. Therefore, neurological complications of dengue always should be thought when the occurrence of these signs/symptoms associated with other common manifestations of dengue.

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MENINGITIS IN CHILDREN, IN QUETZALTENANGO, GUATEMALA – PROGNOSTIC FACTORS

Henry Hugo Galvez[1], Paulina Bixcul[2], Elie De Leon[1]. [1]"Departamento de Pediatria, Hospital Nacional de Occidente","Unidad de Neurologia Pediatrica""Universidad de San Carlos de Guatemala", Guatemala; [2]"Hospital Nacional de Occidente" "Departamento de Pediatria" "Universidad de San Carlos de Guatemala", Guatemala;

AIM: The meningitis it´s a common cause of mortality or several illness. The prognostic factor are described before and have a god correlation with mortality.

MATERIAL AND METHODS: We review the files between June 2007 and May 2012, with diagnosis of Meningitis. The diagnosis was made by clinical suspicious and confirmed by Lumbar Puncture. Patients were included in two groups, with and without Culture positive. We analysed Age, values from Cerebrospinal fluid, days before to start treatment.

RESULTS: We include 119 patients, the mean age was 1.3 years and the range was 3 months to 12 years. The incidence of Bacterial meningitis was 30%, and the germ most frequent found was S. Pneumoniae. The global mortality was 28%, but the fatality rate of bacterial meningitis was the 52%. The mean age of patient deceased was 8 months. The most important values of cerebrospinal fluid was, a cellularity over 10,000 cells and hypoglycorrhachia <20mg/dl. That was most constant values of bad prognosis in patients deceased. The combination was found in 65% of them. The delay over 4 days in the treatment increase the risk of mortality 6 times.

DISCUSSION: We found the same rate of bacterial meningitis described in other population, but we found a higher fatality rate of bacterial meningitis 52%, and the most frequent germ found was S. Pneumoniae. The most important factor of prognosis was: Age under 1 year, higher cellularity >10,000 cells, hypoglychorrhachia under 20 mg/dl and the delay in start the treatment over 4 days.

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EPIDEMIOLOGICAL FEATURES OF PURULENT BACTERIAL MENINGITIS AMONG CHILDREN OF ALMATY

Galiya Kuttykuzhanova[1], Lyazzat Yeraliyeva[1], Konstantin Pushkarev[2]. [1]Kazakh National Medical University named after SD Asfendiyarov, Kazakhstan; [2]Center of Pediatric emergency care Almaty, Kazakhstan

Abstract: Infections of the central nervous system in children are among the most severe and adverse effects on their disease, the first of which are the meningitis. Analyze the etiological structure, epidemiological features of purulent bacterial meningitis among children of Almaty. .

The study of 1183 cases of bacterial meningitis confirmed by bacteriological methods of research. .

The etiological structure of purulent bacterial meningitis in 28.2% of cases of pneumococcal meningitis represented (13.1±0.9%), staphylococcus (7.6±0.7%) and Haemophilus Influenzae (5.4±0.6%) aetiology. Pneumococcal meningitis was diagnosed in 155 persons (50, 2±2, 8%); staphylococcal meningitis in 90 (29, 1±2, 6%); H. influenzae type«b» 64 (20, 7±2, 3%). Sick children aged 1 to 6 months (16, 8±2, 1%), from 7 to 12 months (12, 3±1, 8%) and from 4 to 6 years old (20, 4±2.3%). Children up to 1-month meningitis diagnosed (2, 6±0, 8%) of cases. Meningitis often diagnosed among boys (64, 7±2, 7%), is less common in girls (35, 3±2, 7%).

Pediatric patients with bacterial meningitis, regardless of age and etiology there is a violation of the immune status, reflected in the reduction of CD3+, HLA-DR, CD16+, B-lymphocytes. The most pronounced changes in the immune status were observed at the age of 1-6 years, in terms of etiology with staphylococcal meningitis, characterized by a significant decrease in the level of mature differentiated T-lymphocytes (CD3+), B- lymphocytes, T-killer cells, CD16+. More than half of children with staphylococcal meningitis values of T-lymphocytes and T-helper cells decreased to 50% of normal.

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A CASE OF INFECTIVE ENDOCARDITIS PRESENTED WITH BACTERIAL MENINGITIS

Seongjoon Kim, Joong Hyun Bin, Ji Yoon Han, Tae-Hun Eom. Department of Pediatrics, College of Medicine, Catholic University of Korea, Republic of Korea

Introduction: Neurological complications are a common cause of morbidity and mortality in patients with infectious endocarditis. The most frequent complications include cerebral infarction, intracerebral haemorrhage, meningitis, cerebral abscess and mycotic aneurysm. But, bacterial meningitis as a presenting symptom of infective endocarditis is rare.

Methods: We describe a pediatric patient who developed bacterial meningitis as a presenting symptom of mitral valve endocarditis.

Case Description: The patient is a 15-year old girl without any past cardiac disease. Following an initial two weeks period of malaise and headache, she was admitted to the hospital with fever, headache and meningeal irritation signs. The clinical symptoms, the laboratory examinations and lumbar puncture supported the diagnosis of bacterial meningitis. After prompt empirical antibiotics were given, headache and meningeal irritation signs were resolved immediately. But, fever and high level of systemic inflammatory markers were continued, even though repeated lumbar puncture revealed almost complete resolution of meningitis. We searched for another focus of fever at the 7 day after admission. Finally she diagnosed with a mitral valve endocarditis and treated with valve replacement.

Result: Diagnosis of infectious endocarditis was delayed for 7 days due to lack of clinical signs and symptoms likewise murmur.

Conclusion: Bacterial meningitis can be a presenting manifestation of infective endocarditis. Underlying infective endocarditis should be diligently sought in any patient presenting with bacterial meningitis, even if typical signs and symptoms are initially absent.

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PAEDIATRIC BACTERIAL MENINGITIS IN SOUTHERN NIGERIA

Angela Ine Frank-Briggs. University of Port Harcourt, Nigeria

Background: Meningitis is an inflammation of the meninges, and is defined by an abnormal number of white cells in the cerebrospinal fluid. Approximately 1.2 million cases of bacterial meningitis occur annually worldwide. In young children, the most frequent causes include Neisseria meningitides (NM) Streptococcus pneumoniae (SP) and Haemophilusi nfluenzae type b (Hib). More than 50% of Neonatal meningitis is caused by Streptococcus agalactiae. Sub-Saharan Africa ("meningitis belt") has the greatest disease burdens of Hib, SP and NM infections. Hib and SP infections account for approximately 500,000 deaths per year in the region in 2001. NM is additionally responsible for recurring epidemics. This study highlights pattern of bacterial meningitis and complications in children at the University of Port- Harcourt Teaching Hospital (UPTH), in Southern Nigeria.

Method: This is a 4 year prospective study of children with meningitis at neurology unit of UPTH between June 1st 2009 and May, 31st 2013.

Results: Out of 10,094 patients seen in the department, 874 of them had meningitis, a prevalence of 8.66%. Male (568) and female (306), age range between 3 months and 16 years. The bacterial yield was streptococcus pneumonia in 103(11.78%). They were all followed-up for at least one year to assess the outcomes. 94 cases (15.1%) with deficits -58 males and 36 females. The common complications are cerebral abscess 13 (13.83%), recurrent seizure 28(29.8%), motor developmental delay in 20%. Others were cortical blindness, speech deficits and behavioral impairment.

Conclusion: It is important to prevent the disease by vaccination and sentinel surveillance.

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MENIGOENCEFALITIS TUBERCULOSA EN NIÑOS

Johnny David Montiel Blanco. Institutonacional de salud del niño, Peru

Introduction: Siendo la Meningoencefalitis Tuberculosa una complicación severa de important e mortalidad de esta enfermedad de salud pública, y con dificultad para su diagnóstico precoz, realizamos este estudio para describir sus características epidemiológicas, clínicas, laboratoriales y neuroimagen.

Metodo: Este estudio descriptivo, retrospectivo, revisó los registros de 45 niños seleccionados, hospitalizados entre Enero del 2009 y Setiembre del 2013.

Resultados: Ocurrió 11.2 casos por año, siendo los niños entre 1 y 5 años los mas afectados, con bajo por centaje de identificación bacteriológica, con letalidad del 11.3 %.

Conclusiones: Se requiere considerar en conjunto los hallazgos clínicos ,laboratoriales y neuroimagen para el diagnostico oportuno de menigoencefalitis en niños.

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TUMORAL CEREBRAL NEUROSCHISTOSOMIASIS IN A FILIPINO CHILD: A CASE REPORT

Alpha Mallillin, Marilyn Ortiz. Phiiippine Children's Medical Center, St Luke's Medical Center - Quezon City, Philippines

Background: Schistosomiasis affects more than 200 million people, however its public health importance is often underrated. Symptomatic cerebral neuroschistosomiasis (NS), a severe and rare presentation, accounts for 2-4% of infected individuals. Early recognition is necessary since an available effective treatment may prevent further neurological deterioration.

Objective: This report aims to provide the readers increase awareness on clinical presentation, proper evaluation, early diagnosis and treatment of cerebral NS and to describe its characteristic MRI appearance.

Case: We present a case of a 12 year old male residing at Leyte, Philippines with signs of increase intracranial pressure, visual problems and focal neurologic deficits. Cranial CT scan considers multicentric glial brain tumor. He was referred to our institution for neurosurgical consult. Cranial MRI showed two mass lesions (hypointense on T1 and hyperintense on T2) exhibiting a cluster of confluent nodular and linear enhancement with extensive white matter edema. Blood circumoval precipitin test is positive. Kato Katz and stool concentration technique are negative for any ova/parasite. Treatment with Praziquantel and Prednisone showed marked improvement in neurologic deficits and marked reduction in enhancement at repeat MRI done after 2 months of starting the medication.

Conclusion: This case highlights the importance of early recognition and high index of suspicion of cerebral NS in a young patient from an endemic area. The typical MRI appearance may be useful for diagnosis in endemic regions and in cases imported into countries in which the disease is not endemic.

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PEDIATRIC CENTRAL NERVOUS SYSTEM (CNS) ASPERGILLOSIS: A CASE REPORT

Alpha Dela Cruz Mallillin, Marilyn Hebron Ortiz. Philippine Children's Medical Center, St. Luke's Medical Center -Quezon City, Philippines

Background: Fungal diseases involving the brain are usually secondary to systemic or pulmonary infection, and, in most patients, spread hematogeneously. Little is known about CNS aspergillosis in children and whether there are any differences from adult. Novel agents have entered the armamentarium of antifungal drugs, but invasive aspergillosis (IA) such as CNS aspergillosis remains to be a devastating opportunistic infection and a medical challenge with a published mortality rate of >80%.

Objective: This report aims to provide the readers increase awareness on clinical presentation, evaluation, and early and accurate diagnosis of neuroaspergillosis in young patients.

Case: We present a case of a 4-year-old female, apparently well and with unknown history of past infections, now presents with seven-weeks headache and other signs of increase intracranial pressure. Cranial MRI with contrast showed non-enhancing posterior fossa cystic masses with obstructive hydrocephalus (lateral ventricle debris), to consider pilocytic astrocytoma. Intraoperatively, the lateral ventricular debris was described as mucoid and moss-like. Histopathological diagnosis of intraventricular cyst and posterior fossa mass showed fungal elements (hyphae) and neuroepithelial cyst wall, respectively. CSF culture was unremarkable. Serum Aspergillus Galactomannan antigen assay is positive at 0.724 (cut off: <0.5 normal). The patient was given Amphotericin and later Voriconazole.

Conclusion: This case highlights the importance of high index of suspicion of CNS aspergillosis in a young patient presenting with increase intracranial pressure. Search for more appropriate therapy may improve the outcome of this life threatening infection.

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CERVICAL SPINAL CORD COMPRESSION IN A CHILD WITH CERVICOFACIALACTINOMYCOSIS

Po-Cheng Hung. Chang Gung Children Hospital, Taiwan

Actinomycosis is a rare, chronic, suppurative, and slowly progressive granulomatous disease caused by a group of filamentous gram-positive anaerobic bacteria belonging to the normal flora of the oral cavity, gastrointestinal, and genitourinary tracts. It may involve several organs; however, spinal cord compression has rarely been reported. We report a 7-year-3-month-old girl who suffered from neck pain with restricted movement, poor appetite, body weight loss, mild right limbs weakness, and a non-tender neck mass. Histopathology of the neck mass revealed sulfur granules of actinomyces. Since actinomycosis was strongly suspected, she was treated with high dose of parenteral penicillin G followed by oral penicillin with complete recovery.

Conclusion: actinomycosis should be considered as a differential diagnosis of neck mass and cervical spinal cord compression.

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MULTIPLE CEREBRAL ABSCESSES FOLLOWING SALMONELLA MENINGITIS IN A NEONATE

Masiel Barrantes & Maria del Pilar Medina. Universidad Peruana Cayetano Heredia, Peru

Neonatal infection due to Salmonella is a rare entity with a higher incidence in developing countries. In infants under three months of age Salmonella infection is easily generalized, causing focalized complications with a very high prevalence of morbidity and mortality. Brain abscess is an uncommon but serious life threatening complication in infants.

This paper reports an unusual case of Salmonella meningitis complicated by multiple cerebral abscesses in a 7-day-old premature neonate during a NICU outbreak. Salmonella Enterica group C1 was isolated from blood and cerebrospinal fluid cultures. Brain ultrasound revealed important heterogeneous hyperechogenic collections in the left frontal and parietal lobe consistent with multiple abscesses with signs of ventriculitis confirmed by MRI. Surgical drainage combined with prolonged systemic antibiotic therapy resulted in a favorable clinical outcome. Five months after completion of therapy the infant exhibits a mild paresis of the left arm and left hemibody hypertonia. Rest and postural tremor of the left lower limb were also present. A follow-up brain MRI manifests no lesions.

In view of increased incidence of Salmonella meningitis in developing countries, it is an important differential diagnosis in neonates with gram-negative bacillary meningitis. Prolonged treatment should be started with susceptible antibiotic therapy to reduce the incidence of relapse and complications. Early recognition of acute complications is important to reduce adverse neurological sequelae or death.