CONFERENCE ABSTRACTS

4th PEDIATRIC INFECTIOUS DISEASES CONFERENCE 2013 (PIDC 2013) – EMERGING INFECTIONS & VACCINE DILEMMAS, Mumbai, 17th November 2013

ABSTRACT 1 : ABDOMINAL MASS DUE TO ATYPICAL MYCOBACTERIA IN AN HIV INFECTED CHILD - HOW LARGE IS LARGE?

Keywords: Tuberculosis, HIV, Biopsy

Abstract:

Abdominal tuberculosis (TB) with formation of huge mass is rarely reported. Though abdominal TB commonly presents as abdominal lymphnodes in children, presentation as a large peritoneal mass is rare. Though masses as big as 8 cms due to tuberculosis have been reported, mass of 20cms in a child has rarely been reported to be due to TB as was seen in our patient.

An 11 years old boy recently diagnosed to be HIV infected presented with generalized abdominal pain and progressive abdominal distension along with fever for 1 month. On examination, abdomen was tender and he had guarding with rigidity along with hepatosplenomegaly. He was started on IV antibiotics, IV fluids and ionotropes. X-ray chest showed hilar opacities and ultrasound (USG) abdomen showed moderate ascites, multiple enlarged mesenteric lymphnodes and echogenic mesentery with few dilated small intestine loop with sluggish peristalsis. CT abdomen revealed enlarged partly conglomerate mildly enhancing lymphnodes of varying size in the upper abdomen and retroperitoneum and small bowel mesentery with areas of necrosis within. He underwent explorative laprotomy and was found to have normal bowel with few small mesenteric nodes and a large retroperitoneal lymph node mass measuring 15 X 20 cm. Tissue biopsy of the mass showed acid fast bacilli (AFB) on smear. Histopathological examination of tissue was suggestive of mycobacterial infection. He was started on antiretroviral therapy consisting of abacavir, lamivudine, efavirenz along with ATT consisting of rifampicin, isoniazid, pyrazinamide, ethambutol and amikacin along with azithromycin (to cover atypical mycobacteria). Six weeks later, TB culture showed presence of slow growing mycobacteria and nucleic acid test proved it to be mycobacterium avium intracellulare (MAI), so pyrazinamide was stopped. He was continued on the remaining ATT and ART and is on regular follow up.

This case highlights the fact that abdominal TB can also present as an abdominal mass and may infact mimic malignancy and diagnosis would require early tissue biopsy.

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ABSTRACT 2 : CYSTICERCAL ENCEPHALITIS

Keywords : Neurocysticercosis, Encephalitis, starry sky appearance

Abstract:

Introduction: Neurocysticercosis is a major cause of epilepsy and neurological disease in many developing countries. Clinical manifestations of neurocysticercosis are variable, related to the topography, number and stage of parasites, and the intensity of the immuno-inflammatory response. Cysticercus encephalitis is a rare presentation of neurocysticercosis associated with significant morbidity and refractory seizures. We hereby present a case of 10 years old male child who presented to us with fever, convulsions & altered sensorium.

Case summary: 10 years old male child hailing from Uttar Pradesh presented to us with complaints of fever, convulsions and altered sensorium for 3 months. Convulsions were generalized tonic clonic and were increasing in frequency. Altered sensorium was in the form of not recognizing parents and not responding to oral commands. Examination revealed spasticity and neck rigidity with no focal deficits. MRI brain and spectroscopy was suggestive of starry sky appearance studded with cysticercae. Work up for TB and HIV was negative. Cerebrospinal fluid analysis (Culture and TB MGIT) was within normal limits. Immunodeficiency work up – lymphocyte subset assay, nitroblue tetrazolium test and immunoglobulin levels within normal limits. Child was treated with steroids, albendazole and anticonvulsants. Fever subsided, convulsions were controlled and sensorium gradually improved.

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ABSTRACT 3 : UNUSUAL PRESENTATION OF DENGUE AS MYOSITIS

Keywords: Dengue fever, myositis

Abstract:

Dengue fever is caused by viruses belonging to family Flaviviridae, characterized by fever, myalgia, rash, leukopenia. Dengue infections cause a spectrum of illnesses from self-limited fever, hemorrhagic manifestations, and increased vascular permeability. Myositis associated with viruses is a well-described entity but few reports are with dengue virus infection. Possible mechanisms are viral invasion of muscle or toxins like TNF. We report two patients, who presented with fever, severe myalgia and had high levels of CPK. Both were positive for Dengue NS1.

First child, 11 year-old boy, admitted with sudden onset of fever with severe calf muscle pain for 2 days. The second child, 6 years-old boy, admitted with fever for 4 days, severe lower limb muscle pain associated with weakness of both lower limbs for 1 day. There was no history of retro-orbital headache, arthralgia or rash in both children. On examination calf muscle tenderness was noted in both. There was no hypotension, third space loss of fluids, petechiae or mucosal membrane bleeding. Systemic examination of second child had mild proximal muscle weakness of lower limbs with preserved reflexes. Initial investigations showed normal platelets on complete blood count with no hemoconcentration, electrolytes were normal, CPK levels were very high 2430 IU/lit and 1413 IU/lit respectively(Normal value 0-120 IU/lit). Dengue NS1

was positive in both the children. Both the children were treated with antipyretics and fluid.

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ABSTRACT 4 : DIPHTHERIA AFFECTING UNCOMMON SITES (CONJUNCTIVA AND NOSE): REPORT OF TWO CASES

Abstract :

Purpose/Objective:World Health Organization (WHO) reported 4887 cases of diphtheria in the year 2011, of them 3485 are from India which appears to be a gross underestimation. This report highlights involvement of uncommon sites.

Materials and Methods: Two children of diphtheria involving conjunctiva and nose presenting to south Indian children hospital have been described with their profile and outcome.

Results: A five year female child presented with history of fever, left eye swelling with redness and throat pain. Examination revealed right tonsillar and left eye palpebral conjunctival membrane with hemorrhage of bulbar conjunctiva. Another five year male child presented with bloody discharge from right nose 8 days back and blocked nose of 15 days duration. No other systemic findings were noted in both of them. Smears from conjunctiva, nose and tonsils were positive for C. diphtheria by Albert's stain. Both of them were treated with standard regimen of anti-diphtheritic serum and benzyl penicillin with uneventful recovery.

Conclusion: In the era of effective vaccination being available and humans being the only reservoirs, these morbidity and mortality are unacceptable. WHO needs to prioritize its eradication next to poliomyelitis.

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ABSTRACT 5 : CHANGING PREVALENCE AND RESISTANCE PATTERNS IN CHILDREN WITH DRUG RESISTANT TUBERCULOSIS

Keywords: Drug resistant tuberculosis, children, India

Abstract:

Aim: There is no study to depict whether the drug resistance (DR) pattern is changing over a period of time in children with tuberculosis (TB). Hence this study aims to determine whether prevalence of DR-TB in children is changing over a period of time and the evolving patterns of resistance encountered to the anti-tubercular drugs.

Methods: Retrospective study involving 1311 pediatric patients referred to the Pediatric TB clinic at B J Wadia Hospital for Children, Mumbai from April 2007 to March 2013. Yearly prevalence of DR-TB was calculated and yearly type of DR was evaluated. Prevalence of DR-TB before and after 2010 and also type of resistance before and after 2010 were analyzed.

Results: Overall prevalence of DR TB was 86 (6.6%) in our study with an increase from 23 (5.6%) to 63 (7%) patients from pre 2010 to post 2010. Overall quinolone resistance increased from 9 (39.1%) in pre 2010 era to 59 (93.7%) in post 2010 era (p=0.0001). Ethionamide resistance also increased from 6 (26.1%) to 31 (49.2%) (p=0.04). Aminoglycoside resistance was 1 (4.3%) in pre 2010 era and 12 (19%) in post 2010 era (p=0.17).

Conclusion: There is increasing resistance to second line ATT drugs particularly flouroquinolones and ethionamide. Hence there is dire need to avoid rampant use of drugs with anti-tubercular activity for non-tubercular infection and to step up surveillance for DR-TB in adults most of who are a source of infection for the pediatric population.

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ABSTRACT 6 : EOSINOPHILIC EMPYEMA

Keywords : eosinophilia, eosinophilic empyema

Abstract:

Introduction: Pleural fluid eosinophilia remains a controversy in etiology and diagnosis. We report a rare case of 6 years old female child with eosinophilic empyema with peripheral eosinophilia which responded to antibiotics, antihelminthics and steroids.

Case summary: A 6 years female child presented with fever on & off for 2 months, cough for 8 days. Examination and CXR revealed left sided pleural effusion. Complete blood counts (CBCs) showed leucocytosis with hypereosinophilia with absolute eosinophil count of 24000/cumm. Pleural tap showed polymorphs of 13000/cumm with predominant eosinophils, proteins of 1.3gm%. HRCT showed left sided effusion with consolidation. Stool microscopy was negative for parasites. Work up for TB was negative, Pleural fluid culture was negative with no fungal hyphae or malignant cells. Peripheral smear for microfilaria after DEC stimulation was negative. Immunodeficiency work up showed very high IgE levels (12000 IU/ml). HIV was negative. Child was treated with intravenous antibiotics, albendazole and diethlycarbamazine for three weeks. While on treatment, patient developed non pitting edema of both upper limbs with itching which responded to steroids in 3 days. Child improved, serial CBC's showed decrease in eosinophil count. Repeat eosinophil count after four weeks was normal and IgE levels had decreased (7000 IU/ml). Child is

healthy and X-rays on follow up after 3 months are normal.

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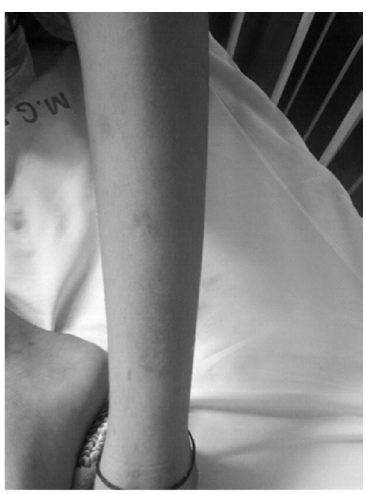
ABSTRACT 7 : ERYTHEMA NODOSUM: AN ATYPICAL PRESENTATION OF ABDOMINAL TUBERCULOSIS

Keywords : erythema nodosum, extrapulmonary, tuberculosis

Abstract:

Background & Aims: Erythema nodosum (EN) is a reaction pattern to infection and sometimes to drugs. Histological features suggest that this is an immunological reaction with immune complex deposition within the dermal vessels. Our case is a rare example where EN is associated with extrapulmonary tuberculosis (TB), suggesting a clear evidence of immunological reaction rather than a primary bacterial event.



Case: An 11 years old child presented with complaints of high grade fever, generalized lymphadenopathy, painful nodules over shins and loose stools alternating with constipation since the last 15 days with weight loss. Mild tenderness in right iliac fossa was present. Investigations revealed leucocytosis with raised ESR, strongly positive TST and induced sputum negative for AFB. USG and CECT abdomen showed necrotic lymphnodes with omental and IC junction thickening. Lymph node biopsy revealed caseating granulomas. Patient was started on 4 drug antituberculous therapy (ATT). On discharge marked improvement in symptoms were present.

Conclusion: Consider strong possibility of extra pulmonary TB presenting as EN especially in developing countries like India in absence of overt signs of TB. The most important step in the management of EN is the treatment of underlying disorder. ATT should be started presumptively for EN with a positive TST result with or without a positively identified focus of infection.

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ABSTRACT 8 : FUSOBACTERIUM NECROPHORUM GANGRENOUS STOMATITIS: A CASE REPORT

Abstract:

Anaerobic bacterial infections of mucous membrane occur after the breakdown of mucosal barrier because of some other pathology. We report a case of gangrenous stomatitis due to fusobacterium necrophorum in a child. An eleven month old child was admitted to some other hospital with high fever and convulsions and child was put on higher antibiotics.As the child developed some oral membranous lesions with difficulty in opening the mouth he was transferred to our hospital. In the course of the hospitalization, child developed oral blackish necrotic lesions.Investigations revealed normal blood countswith neutrophilic reaction.Smears taken from multiple areas of oral cavity and lips showed organisms resembling fusobacterium necrophorum in all the smears and culture grew *staphylococcus aureus* sensitive to linezolid. She was put on penicillin, metronidazole and linezolid and the lesions gradually improved over a period of 10 days with complete normalization of the mucous membrane of the oral cavity after 10-15 days.

Conclusion : As the anaerobic organisms are normally present in the mucous membrane, irrational use of higher antibiotics may lead to these type of dangerous consequences wherein some children may end up with cancrum oris having a destructive sequelae.

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ABSTRACT 9 : HEMATOLOGICAL MANIFESTATIONS IN PARVOVIRUS INFECTION

Keywords: Parvovirus infection, anemia, pancytopenia

Abstract:

Background: Parvovirus (B19) is one the commonest infection leading to varied hematological manifestations. Incidence is more in patients with underlying hematological disorders, malignancies and HIV. Here we review 14 patients who were diagnosed with parvovirus infection based on clinical suspicion and confirmed by serology.

Aims: To study various hematological manifestations in parvovirus infected patients. To correlate with the predisposing infection and study outcome of treatment.

Methods: Retrospective study of 14 patients was done who were serologically diagnosed on basis of positive of Parvovirus IgM and bone marrow consistent of Parvovirus infection. Laboratory investigations like complete blood count (CBC), reticulocyte count, ESR, and bone marrow study were done as indicated.

Results: Unexplained persistent anemia was the most common finding but all cell lines were affected. Hemolytic anemia and HIV were the most common pre-disposing infection. Immunocompromised host had longer periods for recovery and more transfusion

requirements.

Conclusions: Prolonged unexplained anemia should always be investigated for parvovirus infection. Although anemia is the most common manifestation, aplastic crisis also occur. IVIG remains the treatment of choice and hastens recovery.

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ABSTRACT 10 : UNUSUAL CASE OF RECURRENT SEVERE ANEMIA AND PROTEIN LOOSING ENTEROPATHY IN A YOUNG INFANT

Keywords : ankylostoma duodenale, protein losing enteropathy, anemia, transfusion

Abstract:

Recurrent severe anemia requiring transfusion in infancy is usually due to hematological conditions. Helminthic infestations are common in tropical countries. Ankylostoma duodenale, though uncommon, has varied clinical presentations ranging from chronic blood loss leading to mild chronic anemia as well as severe anemia requiring blood transfusion. Nutritional deprivation presenting as protein losing enteropathy is also known to occur with Ankylostoma infestation due to severe involvement of jejunum and proximal ileum. Even though infection can occur at any age, the highest rate is in preschool and school age children, but it is very rare amongst infants. We report a case of a 6 month old infant with protein losing enteropathy and severe anemia due to ankylostoma infestation who required multiple transfusions.

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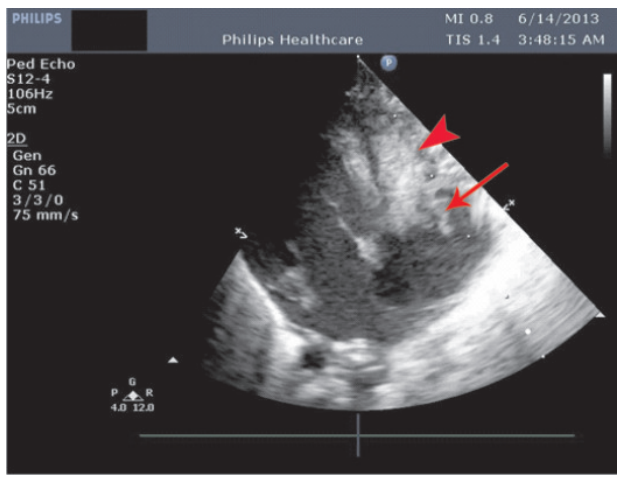
ABSTRACT 11 : RIGHT VENTRICULAR CANDIDAL MYCETOMA IN A PRETERM NEONATE-A RARE CASE REPORT

Abstract:

Fungal endocarditis is a rare occurrence in preterm neonates associated with increased morbidity regardless of type of treatment and more than 50% mortality with diagnosis in majority of cases made post-mortem. We report blood stream infection with candida albicans complicated with endocarditis in a 30 weeks preterm neonate. This neonate had stormy neonatal course, peripherally inserted central catheter and received total parenteral nutrition and treatment for bacterial sepsis previously. On day 45 of life, he had cholestasis, deranged liver function test and persistent thrombocytopenia. Blood culture sent on day 60 of life in view of apnea, bradycardia and desaturations grew C.albicans. The echocardiography obtained in view of desaturations showed large fungal vegetation on tricuspid valve with mycetoma filling the right ventricle. Mycetoma formation as observed here has been noted

Figure: Right ventricle mycetoma,tricuspid valve vegetations(arrow)



only in 9% cases of disseminated candidiasis. In neonates antifungal therapy alone has been noted to have success in comparison with antifungals and surgery in adults. We treated the neonate with Amphotericin B and fluconazole based on culture sensitivity report. The neonate had fluctuating clinical course over next 2 weeks and finally succumbed. Early diagnosis in the presence of risk factors, prompt antifungal therapy and enforcement of strict infection control measures are important to decrease the incidence of fungal opportunistic infection in neonates.

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ABSTRACT 12 : SCRUB TYPHUS WITH SPLENIC INFARCT - AN UNUSUAL PRESENTATION

Keywords : scrub typhus, splenic infarct

Abstract:

A 16 year old adolescent boy presented to the emergency with history of fever of 2 weeks duration, pain in abdomen and in shock. The patient was stabilized hemodynamically. He continued to have abdominal pain and high grade fever with chills and rigors. On examination he had a transverse scar of an earlier abdominal surgery and an eschar over the scar. There was also diffuse tenderness over the abdomen, but no organomegaly. Other system examination was unremarkable. In view of persistent abdominal pain, CT abdomen was ordered which demonstrated malrotated small bowel loops causing gross dilatation of larger bowel and hypodense areas in spleen suggesting splenic infarct. Lab investigations demonstrated a polymorpho-leukocytosis and a positive serology (IgM) for scrub typhus. All other parameters were normal. Patient was managed conservatively with doxycycline. He showed good clinical response and recovery.

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ABSTRACT 13 : EVALUATION OF SEPSIS SCREENING TESTS IN SEVERE BACTERIAL INFECTIONS IN INFANTS BEYOND NEONATAL AGE

Abstract:

Background and Aims: Blood culture has its limitations in detecting serious bacterial infections in infants. There is a need for a test or group of tests which can detect the condition early. Sepsis scoring [CRP, micro ESR, total leucocyte count (TLC), toxic granules, I:T ratio & band cells] have traditionally been used in neonatal age group but very few studies have evaluated these tests in invasive bacterial infections in infants. In this study we have evaluated the role of these tests both individually and in union in predicting the presence of serious bacterial infection.

Methods: 65 patients within the age group of 1 month to 1 year admitted with suspected sepsis, meningitis, consolidation, and urinary tract infection were included in the case control type of study with healthy children taken as controls.

Results: CRP had highest sensitivity of 77.77 %. The sensitivity of both micro ESR and TLC was 66.66% but they had a poor specificity and positive predictive value. Highest negative predictive value was observed for toxic granules (89.28%). Highest specificity of 87.50% was observed for I:T ratio. A combination of micro ESR & TLC have shown maximum specificity of 90.47% and negative predictive value of 94.70%. When three tests were combined, a combination of micro ESR, ESR and toxic granules had 100% sensitivity, 100% negative predictive value and 80% accuracy.

Conclusions: The study indicates that a collective use of simple and low cost screening tests can be a definitive aid to diagnosis of sepsis. Their rapid nature can help us in deciding about appropriate management at the earliest.

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ABSTRACT 14 : SHIGELLA DYSENTERY WITH INTUSSUSCEPTION

Keywords: Shigella dysentery, intussusception

Abstract:

A one year old female infant was brought with complaints of loose stools, vomiting and low grade fever of 4 days duration. The last three episodes of loose stools had blood and mucus. Vomiting was non-bilious and non-projectile. The infant was irritable, crying, feeding poorly and had decreased activity. There was no significant past history. Neonatal period was uneventful. She was developmentally normal and immunized appropriate for her age including rotavirus vaccine. She was on exclusive breast feeding up to 6 months. Complimentary feeds started appropriately, but presently was on additional bottle feeds. On examination, infant was dull looking, irritable, febrile,

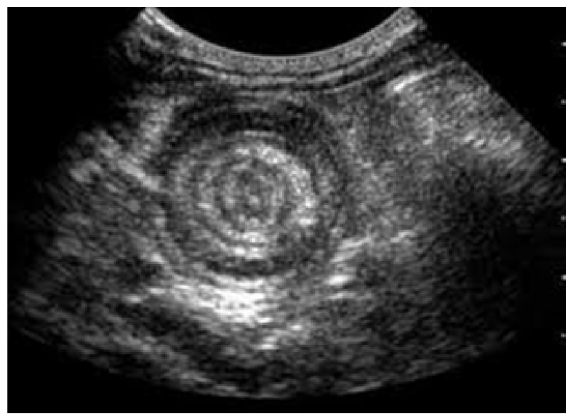

Figure: Ultrasonogram showing intussusception

adequately hydrated with stable vitals. There was no abdominal distension or mass palpable. Other systemic examination was unremarkable. Laboratory investigations revealed polymorpho leukocytosis and elevated C-reactive protein. Parenteral antibiotics were started after a blood and stool culture. The first two abdominal ultrasonogram (USG) were normal. As the infant continued to pass blood in stools, Meckel's scan and a repeat USG done. Meckel's scan was normal while the repeat USG abdomen demonstrated features of intussusception. The intussusception was reduced by ultrasound guided hydrostatic method. However, blood and mucus in stools continued. Meanwhile, a stool culture reported growth of Shigella species. Infant was started on cotrimoxazole as per the sensitivity pattern. She responded and recovered completely.

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ABSTRACT 15 : CASE SERIES OF MEMBRANE OVER THE TONSILS IN A TERTIARY CARE INFECTIOUS DISEASES HOSPITAL IN MUMBAI

Keywords: Re-emerging infection, diphtheria, membrane over tonsil, changing epidemiology, vaccination, anti-diphtheritic serum, carnitine

Abstract :

Background and aims: To document the case profile of suspected diphtheria – a re-emerging infection with changing epidemiology in the vaccination era. We present a series of four cases of membrane over tonsils (WHO case-definition for suspected diphtheria) with their various parameters on history and examination. All cases were admitted over the past three months from various areas of Mumbai

Methods: Clinical profile of four cases with membrane over the tonsils were documented prospectively and the findings presented.

Results: Table 1

Conclusions: Vaccination with diphtheria may not always prevent the disease, especially when booster

Table 1: Profile of all children

No	Age/ Sex	Immunization status	Duration of illness at presentation	Contact history	Symptom	Signs	Complications	Microbiology	Treatment	Outcome
1	3/F	No	5 days	None	Fever, drooling, swelling over neck	Bull neck, cervical LDN, stridor, membrane (L+P+T)	Shock, AKI, MODS	Smear negative; culture negative (Ab treatment ouside)	CP, ADS, Carnitine, mech. Ventilation, fluids, inotropes	Death on day 7 of illness
2	5.5/F	Partial	3 days	None	Fever, drooling, inability to speak	Enlarged tonsils, Membrane (T)	none	Smear negative; culture positive	CP, ADS, Carnitine, fluids, anti-secretory agent	Recovered, immunized
3	7/M	Full	3 days	None	Fever, throat pain, swelling over neck	cervical LDN, Enlarged tonsils, Membrane (T)	none	Smear positive, culture awaited	CP, ADS, Carnitine, fluids, anti-secretory agent, blood transfusion	Under treatment
4	9/M	Full	4 days	None	Fever, cough, difficulty in swallowing	Enlarged tonsils, stridor, Membrane (T + P)	none	Smear negative; culture negative (Ab treatment ouside)	CP, ADS, Carnitine, mech. Ventilation, fluids, anti-secretory agent	Recovered, discharged

doses are lacking. Case presentation of diphtheria has not changed compared to the pre-vaccination era. However, disease outcome is better in children who are even partially immunized. Efforts must be directed towards better immunization coverage. There is an upward age trend in the susceptible population and thus boosters must be emphasized. Outcome is better when early treatment is instituted and early diagnosis requires a high index of suspicion on part of the clinician. Early administration of anti-diphtheric serum (ADS) is imperative to improve survival and thus earlier referral to centers with ADS availability and wider availability of ADS would help reduce mortality. All cases of diphtheria should receive carnitine supplementation in addition to ADS, as it reduces the incidence and mortality of myocarditis in this "strangling angel of children".

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ABSTRACT 16 : VACCINE ASSOCIATED PARALYTIC POLIOMYELITIS

Keywords : Oral polio vaccine, paralytic polio, vaccine associated

Abstract :

Vaccine polio virus can cause paralytic polio. We report a case of 5 months old male child who presented to us with fever and acute onset flaccid paralysis of right lower limb. Child had received oral polio vaccine 15 days prior to the onset of illness. Stool sample was positive for vaccine polio virus and negative for wild polio virus.

Case report: A 5 months old male child presented to us with history of fever and decreased movements of right lower limb since 1 day. There was no history of antecedent trauma or intramuscular injection received. He was a healthy child with milestones appropriate for age. Pulse polio immunization was received 15 days prior to onset of weakness. On examination, child was conscious and alert. All peripheral pulses were

well felt and fundus examination normal. Neurological examination revealed hypotonia & absent reflexes in right lower limb. During ward stay, flaccid paralysis progressed to involve left upper limb and left lower limb over next 7 days. CSF examination was normal. EMG revealed widespread active axonal degeneration at anterior horn cell level. MRI brain was normal. MRI spine showed T2 hyperintense signals localized to anterior horn cells from C3 to C7 & D9 to conus suggestive of poliomyelitis. Stool samples were positive for vaccine polio virus and negative for wild polio virus. Mother's HIV was negative. Immunodeficiency work up not possible due to financial constraints.

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ABSTRACT 17 : BLASTOCYSTIS HOMINIS DIARRHEA –A CASE REPORT

Keywords : Oral polio vaccine, paralytic polio, vaccine associated

Abstract :

Despite the high prevalence throughout the world and many reports across all continents, Blastocystis Hominis related gastrointestinal illness has not been much reported from India. We report a child with chronic diarrhea related to B.hominis.

An 8 year old male child attended the OPD with history of diarrhea of two months duration. He had 5 -6 semisolid to loose stools every day with abdominal pain. He didn't have fever or vomiting.He used to drink clean water. On examination his weight and nutritional status was normal with no anemia. Other systemic examination was normal. Stool microscopy showed few pus cells with cysts of blastocystis hominis in plenty. Modified AFB stain did not show any acid fast parasites and culture did not grow any organisms. He was treated with 3 days course of Nitazoxanide 200 mg daily with complete recovery of his symptoms. A meticulous search for B.hominis in stool samples of children with gastrointestinal symptoms where in no definite cause is established will go a long way in knowing the prevalence and clinical pattern of illness in India too.

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ABSTRACT 18 : STUDY OF FUNGEMIA IN PEDIATRIC INTENSIVE CARE UNIT AND ASSOCIATED RISK FACTORS

Keywords : blood fungal culture, pediatric intensive care unit

Abstract :

Background and Aims: Invasive fungal diseases cause significant morbidity and mortality in immunosuppressed patients. Patients in intensive care units require invasive procedures,vital supports and antibiotic use; predisposing them to fungal infections. There is a paucity of such data outside the neonatal intensive care Unit. Thus, we planned to study the prevalence of fungemia in the pediatric intensive care unit (PICU),associated risk factorsand outcomes.

Methods: A prospective analysis of 48 children admitted to PICU over six months and fulfilling the inclusion criteria was done. Blood samples of patients with duration of stay of 7 or more days in PICU were sent for fungal cultures on day 7. Categorical data was analyzed by Chi square test at 5% significance.

Results: Blood fungal cultures were positive in 3 patients (6.25%). The cultures grew candida parapsilosis (75%) and candida albicans (25%). Fungemia was not observed to cause significant mortality in the admitted patients but duration of PICU stay in these patients was significantly longer($p = 0.024$). Other clinico-demographic and risk factors were not significant.

Conclusions: Patients in our PICU, mainly admitted for medical indications, did not include many post-operative patients, malignancies, patients on immunosuppressant or with neutropenia; factors which have been associated with increased fungal sepsis. Thus, our PICU shows a relatively low incidence of blood fungemia.

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ABSTRACT 19 : HANTAVIRUS AND TUBERCULOSIS CO-INFECTION IN AN INDIAN CHILD

Keywords : hantavirus, children, India

Abstract :

Hantaviruses are identified as etiological agents of two human diseases, hemorrhagic fever with renal syndrome (HFRS) and hantavirus pulmonary syndrome (HPS).A 9 years old girl presented with fever, dry cough mainly during night time with post-tussive vomiting for 7-8 days. She also had breathlessness for 3 days. Her younger brother had been treated for tuberculous osteomyelitis and had completed anti-tuberculous therapy one year ago. There was no recent travel but there were rats in the house. On admission, patient was febrile, had tachycardia with cold extremities. Blood pressure was 98/60 mm of hg. Her respiratory rate was 60/min with distress. Air entry was reduced on right side of chest with bronchial breathing on auscultation. Other systems were normal. OptiMAL for malaria and dengue IgM were negative. Chest X-ray showed pleural effusion with underlying consolidation on left side. Quantiferon gold (quantitative) in tube test for tuberculosis was positive. Child was treated with antituberculous therapy (ATT), IV antibiotics and oxygen but had no response. She required inotrope support with invasive ventilation. On day 4 of hospitalization, she had decreased urine output with hemoconcentration. Urine for pneumococcal antigen and blood mycoplasma IgM were negative. Hantavirus

IgM was positive. She was continued on inotropes and required blood transfusion. She subsequently improved by Day 10.

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ABSTRACT 20 : CONTINUED NEUROLOGICAL DAMAGE IN HIV INFECTED CHILDREN DESPITE ANTIRETROVIRAL THERAPY

Keywords : HIV, children, continued neurological damage

Abstract :

Neurological complications occurring commonly in HIV-AIDS infected individuals are either due to primary HIV infection or due to opportunistic infections. Highly active antiretroviral therapy (ART) has been found to decrease the risk of such neurological damage however continued damage can persist inspite of vigorous antiretroviral therapy. We present two HIV infected children who were both on ART for several years but subsequently died due to progression of neurological disease inspite of good viral control.

Case 1: A 13 years old HIV infected boy on ART since 6 years of age presented with progressive increase of involuntary movements of left side of body with increased tone in Sept 2011. He was diagnosed to have left sided dystonia due to infarct in right lentiform nucleus & left cerebellar cortex in April 2004 due to positive antiphospholipid syndrome. At that time he was diagnosed to be HIV infected and was started on Zidovudine (AZT), Lamivudine (3TC) and Nevirapine (NVP). He continued to remain well till July 2011 when parents noticed increased falls due to increase in involuntary movements of left side of body. In Sept 2011, cerebrospinal fluid (CSF) was tested for cytomegalovirus (CMV), Herpes simplex virus (HSV), Epstein barr virus (EBV), HIV proviral DNA and Toxoplasma PCR which were all negative. A repeat MRI was done in Nov 2011 which showed hyper intensities in bilateral cerebellar hemispheres more marked on left side of unknown etiology and right putaminal area of gliosis suggestive of old insult. His MR angiogram was normal. Subsequently, he became bedridden in Dec 2011 and was hospitalized. His CSF Measles and mumps antibodies were negative. His antiphospholipid antibody (APLA) and anti cardiolipin antibodies were also negative. HIV viral load was undetectable. A brain biopsy from right frontal lobe did not show any viral inclusion bodies. EEG showed generalized slowing. He was continued on ART but he succumbed to his illness.

Case 2: A 7 years old HIV infected boy on ART since April 2009 presented with altered sensorium in Nov 2011. In April 2009 at 3 years 4 months of age he had left sided hemiparesis. MRI brain showed infarct in right basal ganglia, internal capsule, corona radiata, perisylvian frontotemporoparietal cortical and sub cortical region with complete occlusion of right main stem middle cerebral artery (MCA). At that time, antiphospholipid antibodies IgM and IgG were positive. HIV viral load currently was 12,100 copies/ml. CSF was normal. ART was shifted to AZT, 3TC and lopinavir/ ritonavir (LPVr). However the child succumbed to his illness in Dec 2011. No other viral markers could be done due to unaffordability.

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ABSTRACT 21 : COMPARISON OF CLINICAL PRESENTATION AND OUTCOME OF NEC AND NON-NEC FOCAL INTESTINAL PERFORATION IN EXTREMELY LOW BIRTH WEIGHT NEONATES - THEORY OF NATURAL SELECTION: A SURGICAL PERSPECTIVE

Keywords : Necrotizing enterocolitis, focal intestinal perforation, ELBW.

Abstract :

STUDY OBJECTIVE: To review and study clinical characteristics and clinico-pathologic cause of bowel perforation in NEC and Non-NEC FIP neonates with ELBW at a suburban children's hospital.

METHODS: ELBW neonates (< 1000gms) admitted with NEC perforations and Non-NEC FIP were analyzed retrospectively from 2009-2013 over a four year period. The data sheets analyzed regarding age of presentation, clinico-pathologic cause of bowel perforation, management offered and subsequent outcome achieved.

RESULTS: NEC GROUP (33): 9 out of 33 NEC babies were ELBW with perforations. NON-NEC GROUP (21): Twelve of the twenty-one babies with Non-NEC perforations qualified as FIPs; the other nine neonates had mechanical cause for perforations and had to be excluded from the study. Out of total of 21 babies in the Non-NEC Group, only seven qualified for the study. Other five ELBW had mechanical cause for perforations: Gastric perforations: 3, cecal perforation: 1 and two neonates had duodenal perforations secondary to neonatal intestinal obstruction.

NEC GROUP: All the nine babies in the group had universal inflammatory changes throughout the small and large intestines. These babies had a very fast progression of symptoms, tended to be sicker in a shorter span and were unstable pre-operatively. Intra-operative a quick lavage with drainage with stomas being mainstay of surgical treatment. More than half of them required two or more operative procedures. Post-operatively these babies had a longer hospital stay. Mortality was higher compared to Non-NEC FIP group (Table 1).

NON-NEC FIP Group: The inflammatory changes were less florid; mostly localized to one segment of bowel usually terminal ileum or cecum / colon or rectum in one instance. There was a large perforation with dehiscence of almost upto one third segment of anti-mesenteric bowel wall. In spite of such large perforation, the

infection was rather localized. Interestingly this group was relatively less unstable pre-operatively, did well intra-operatively with resection anastomosis, usually ended without stomas and had a shorter hospital stay. Mortality was lower in this group compared to the NEC group (Table 1).

Total Babies with Pneumoperitoneum(54)	ELBW (16)	Mortality (6)
NEC Group (33)	9	5 (56%)
Non-NEC Group (Focal IntestinalPerforations) (21)	7	1 (14%)

CONCLUSION: It should be possible to differentiate between NEC perforations and Non-NEC FIP depending on clinical characteristics and parameters available thus enabling to predict a favorable outcome for this cohort of neonates.

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ABSTRACT 22 : DISSEMINATED NOCARDIOSIS IN A PARA-NEONATE

Abstract :

Nocardiosis is caused by ubiquitously present aerobic actinomycetes in soil and dust. It is an opportunistic pathogen that can cause disseminated infection in immunocompromised hosts. The most common site of primary infection is lung. They can disseminate to skin, brain kidneys, joints and eyes through hematogenous spread.

We report a case of 1.5 month old male infant with disseminated Nocardiosis. He presented with hyper pigmented rash on the body since one month, cough, cold, breathlessness and fever since one week. He was diagnosed to have suppurative lung abscess secondary to Nocardia asteroids and which disseminated to cause multiple brain abscesses and probably to skin causing hyper pigmented macules over both upper limbs and lower limbs. This baby did not have any predisposing risk factors but he belonged to a farmer's family. Patient received treatment with sensitive antibiotic (with addition of cotrimoxazole) for suspected Nocardiosis (gram positive branching filaments) on pus smear. In spite of antibiotics, an intercostal drainage and supportive management, the outcome was fatal.

We wish to report this case because of youngest patient ever reported in literature with disseminated Nocardiosis and fatal outcome in spite of sensitive antibiotics in an infant born to HIV negative mother.

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ABSTRACT 23 : KAWASAKI'S DISEASE WITH CHOLANGITIS IN AN OPERATED BILIARY ATRESIA

Kawasaki disease has not been reported in children with cholangitis and biliary atresia.

Case : A 1 years old girl, operated case of biliary atresia (Kasai surgery) presented with fever, clay colored stools and upper respiratory symptoms in April 2012. She had been treated for enterobacter septicemia and pneumonia in March 2012. Currently in April 2012, she had jaundice, hepatosplenomegaly with dilated veins over abdomen and bilateral wheeze. Ultrasound of abdomen showed hepatosplenomegaly with portal collaterals suggestive of portal hypertension. Her repeat blood culture did not grow any organism. She was treated with antibiotics in view of suspected cholangitis. She responded to the same and became afebrile. However after 10 days, she again developed fever, leukocytosis and strawberry tongue with cervical nodes. Her blood culture was still sterile. In view of increasing platelets, high CRP (232) and high ESR (120mm at end of 1 hour) along with clinical features, she was suspected to have Kawasaki's disease. An echocardiography showed left coronary ectasia. She was subsequently treated with intravenous immunoglobulin and fever subsided within 24 hours, leucocyte count and platelets normalized, CRP, ESR started decreasing. Aspirin was not started in view of portal hypertension and underlying liver disease. On follow-up echocardiography in June 2012, there was persistence of the coronary artery ectasia and intermittent fever. She was subsequently treated with prednisolone which was tapered in next 21 days. Her echocardiography in July 2012 showed decrease in coronary dimensions and her fever disappeared.

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