intravenous immune globulin (IVIG) (single dose) and aspirin, in order to prevent development of coronary artery aneurysms. Fever persists in 10–15% of the patients and KD is considered refractory then.

Case Report A 15 months old boy, with unremarkable medical history, was admitted with manifestations and laboratory findings of KD. Initially, IVIG (2g/kg) and aspirin (80mg/kg/24h) were given. Fever insisted and there was a further increase of the PLTs and hemolytic anemia was added. A second dose IVIG (2g/kg) was repeated. As fever remained, pulse IV solu-medrol (30/mg/kg/24h) was given in 3 days. There was a new recur of the fever and of the laboratory findings, thus a third dose of IVIG (2mg/kg) was administered, with complete recession of all manifestations. The extended laboratory investigation revealed positive IgM antibodies for Mycoplasma pneumonia. During the boy's hospitalization, cardiologic echograms where normal.

#### **Conclusions**

- Refractory KD cases might respond to 2 or 3 doses of IVIG (2g/kg), with the addition of pulse IV solu-medrol or other immunoregulator agents (e.g. infliximab). Since the disease is very rare, there are few controlled available data about the benefits of treatment.
- Mycoplasma pneumoniae is considered as a trigger factor for KD, by producing superantigens, and can also trigger hemolytic anemia.
- 3. Though refractory KD is considered as high risk for development of coronary aneurysms, in the case herein, coronary arteries remained intact during all follow up visits.

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#### REYE'S SYNDROME AND DISSEMINATED INTRAVASCULAR COAGULATION PRESENTED BY ROTAVIRUS INFECTION

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Rotavirus is one of the leading causes of severe gastroenteritis in childhood, which is an infection known to be limited to the gastrointestinal system. However, a case of extra-intestinal complication developed during rotavirus gastroenteritis is presented here.

Case A five years old patient with febrile convulsion, also having complaints of vomiting, diarrhea, and fever was brought to our hospital. General condition of the patient was bad; she was unconscious and severely dehydrated. Her laboratory findings showed acidosis and renal failure; coagulation tests showed impairment. During her monitoring, gastrointestinal bleeding, increase in liver function test values, hyperammonemia, neutropenia, and hypoglycemia were developed. Rotavirus antigen was found to be positive in the gaita test. Patient's general condition was improved by giving antibiotics, liquids, fresh frozen plasma, and thrombocites in the early stages after which she was discharged.

Close monitoring of patients with rotavirus gastroenteritis in terms of extra-intestinal complications and applying appropriate treatment in the early stages may save lives.

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### IMPACT OF THREE YEARS INFECTION WITH INFLUENZA A (H1N1) VIRUS IN CHILDREN

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**Background and Aim** Influenza A virus infection involved the public Health System worldwide so much that on June 2009 WHO announced the disease from epidemic as pandemic. Our purpose was to investigate the incidence, clinical characteristics, treatment

and outcome of H1N1 in children with respiratory tract infection required hospitalization in PICU.

**Material and Methods** Influenza A in children hospitalized in our unit with respiratory infection during the period April 2009–March 2012 was confirmed by special pharyngeal sample.

**Results** During this period, 58 out of 322 children were admitted in our Unit with respiratory infection. Seven patients (12%) (4 girls and 3 boys, age  $2^{1/2}$ ,  $4^{1/2}$ , 5,  $6^{1/2}$ , 8, 9 and 10 years), all unvaccinated for H1N1, were influenza A infected. Their initial symptoms were:

- Fever > 38° C (5 cases)
- Respiratory infection (2 cases of pneumonitis)
- Bronchial asthma and pneumomediastinum
- Febrile + status epilepticus
- Cardiac arrest, multiorgan failure

Five children needed intubation and mechanical ventilation. Five had underlying disease -two had asthma, one had bronchopulmonary dysplasia and heart disease, and two had cerebral palsy.

Oseltamivir was administered immediately and for 5 days in all cases and in one case, with persistent infection, for 15 days.

The outcome was good in 6 cases and only the child with bronchopulmonary dysplasia and heart disease developed multiorgan failure and eventually died.

**Conclusion** 12% of patients with respiratory infection in our PICU was H1N1 positive. One patient with severe underlying disease died. 71% need mechanical ventilation and the majority of them had co-morbidities.

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## RESPIRATORY SYNCYTIAL VIRUS AS CAUSE OF LOWER RESPIRATORY TRACT INFECTION IN YOUNG CHILDREN IN CENTRAL AND EASTERN EUROPE

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**Background** Respiratory Syncytial virus (RSV) infection can cause severe morbidity leading to hospitalization and admission to paediatric intensive care unit (ICU). Limited epidemiological data exist about RSV as cause of lower respiratory tract infection (LRTI) requiring hospitalization in Central and Eastern Europe (CEE).

**Methods** This is a prospective cross-sectional observational multicountry epidemiological study. Children younger than 1 year hospitalized for LRTI between October 2009–April 2010 and/or October 2010-April 2011 are included (two consecutive RSV seasons). We present data on differences in LRTI disease severity comparing RSV positive premature infants (gestational age  $\leq$  36weeks) with RSV positive infants without risk factors (gestational age > 36weeks, no congenital heart disease, no bronchopulmonary dysplasia and no neuromuscular disease).

**Results** 3,474 evaluable subjects were included from 12 CEE countries. In 3,354 cases (96.5%) a RSV rapid test was performed: 1,423 cases (42.4%) were tested RSV positive. Among the RSV positive group, 266 infants were prematurely born (RSVppos); 1,034 presented without risk factors (RSVnorf). Mean hospitalization duration were 17 and 8 days respectively for RSVppos group and RSVnorf group (p<0.001). 41.4% of RSVppos required ICU hospitalization versus 12.6% RSVnorf (p<0.001). RSVppos exhibited a longer mean duration in ICU stay versus RSVnorf (13 days vs 6 days, p<0.001). 2.6% of RSVppos died during hospitalization versus 0.3% RSVnorf (p<0.001).

**Conclusions** Premature infants hospitalized for RSV LRTI exhibit a longer stay in hospital, more frequent and longer stay in ICU and a higher mortality compared with infants without risk factors.

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### AN EPIDEMIOLOGICAL STUDY TO ASSESS THE PREVALENCE OF PKDL IN PEDIATRIC AGE GROUP IN ENDEMIC AREAS OF BIHAR

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Post Kala-azar Dermal Leishmaniasis (PKDL) is a dermatosis usually occurs as a sequel of Visceral Leishmaniasis (VL), commonly known as kala-azar (KA), caused by *L. donovani* (L.d.) and characterized by macular, maculo-papular and nodular skin lesion on the whole body surface. It is of considerable epidemiological importance particularly in India because it acts as reservoir for transmission of parasite through sandflies. In India, it appears after a long period, usually 1–2 years or more, in 5–10% of VL cases, but it may also occur without manifestation of VL.

Emphasis on PKDL reporting, the prevalence of PKDL cases is not much clear. Objective to assess prevalence of PKDL in Children in endemic community of Bihar, survey was carried out in a Rukhai village of Chandi PHC, regular occurrences of VL cases and PKDL have been reported. Out of 223 individuals (52% male, 48% female), 41 had past history of VL occurred during 2001 to 2007, 40 cases were treated with recommended dosage of Sodium Antimony Gluconate and only one case Miltefosine; and all were cured. A total of 11 individuals (male-5, female-6) were identified as PKDL cases. Out of 23,915 populations from 4323 households, 12 PKDL cases (Male 5, Female 7) were detected. Out of 12, 9 had past history of VL.

Less than 1 VL case per 10,000 population at sub-district level under KA elimination programme, the estimated prevalence of PKDL, is a matter of concern for policy planners.

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# CLINICAL, BIOCHEMICAL AND ETIOLOGICAL PROFILE OF FULMINANT HEPATIC FAILURE OF VIRAL ETIOLOGY IN CHILDREN

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Viral Hepatitis is a major health problem endemic in many parts of the world. Fulminant hepatic failure is a rare condition that occurs in only 1% of patients hospitalised with an acute viral hepatitis. There is a paucity of literature describing spectrum of fulminant hepatic falure in children in India.

**Objective** To study the clinical, biochemical and etiological profile of fulminant hepatic failure (FHF) of viral etiology in children.

**Methods** The study was conducted in 30 children aged group between 1–15 years admitted with FHF of proven viral etiology in Dayanand Medical College and Hospital, Ludhiana. A detailed clinical evaluation including history, physical signs, staging of hepatic encephalopathy with relevant investigations and viral markers were entered in a pretested proforma.

**Results** Twenty nine patients (96.7%) had enterically transmitted hepatitis. Viral markers for HAV alone was positive in 20 patients (66.67%) and in combination were positive in 28 patients (93.3%), HEV in 7 patients (23.3%) and HBV in 5 patients (16.7%). Eight patients had mixed viral infections. The clinical features included fever and jaundice (100%), anorexia (83.3%), vomiting (76.7%), nausea (73.3%). Complications seen were cerebral edema (53.3%), decreased urine output (30%), GI bleeding (16.6%) and septicaemia (16.6%). The overall survival rate of FHF was seen to be 73.3%.

**Conclusions** HAV was found to be the commonest viral infection causing FHF either alone or in combination with others. Importance of vaccination of children with HepatitisA and HepatitisB vaccine and improvement in sanitation in prevention of FHF cannot be overemphasised.

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#### **COMPLICATED URINARY TRACT INFECTION IN NEONATES**

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Obstructive uropathies present changes in anatomy and function of urinary tract. They are usually discovered during the examination of urinary tract infection.

**Aim of study** To present the most frequent causes in the most frequent types of obstructive uropathyes in neonates.

**Materials and Methods** In our study, 38 neonates were included and they were diagnosed in the Pediatric Clinic during the period of time 2010/2011. They were diagnosed by bacteriological examination of urine, renal ultrasonography, and radiologic examination such as voiding cystourethrogram and excretory urogram.

**Results of study** From 38 neonates, 52.24% were males and 47.76% were females. Vesicoureteral refluks (VUR) is the most common obstructive uropathy in this age and is present in 75% of all cases. Megaureter is present in 25% of cases and posterior urethral valves are present in 12.5% of cases. Results of bacteriological examination show that VUR is connected with Klebsiella pneumonie in 65.1% of cases, while with Ecoli in 34% of the cases. At megaureter the most frequent cause of infection was Klebsiella pneumonie in 68.1%, while E.coli in 38.2% of cases. At posterior urethral valves, E coli was the most frequent cause of infection in 56.3% of the cases. Klebsiella pn. was present in 16.7% of the cases and Proteus spp. was isolated in 25% of cases. **Conclusion** According to the results of the study, it can be concluded that the most frequent cause of urinary tract infection at obstructive uropathies is Klebsiella pneumonie.

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## URINARY TRACT INFECTIONS IN CHILDREN IN JORDAN: THE MICROBIAL PATTERN AND RESISTANCE TO ANTIBIOTICS

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#### **Objectives**

- 1. To study the pattern of pathogens causing UTI in children in Jordan
- 2. To study the frequency of E. coli resistance to antibiotics.

**Settings and method** A prospective study of all cases of UTI presented to our pediatric department both in-patient and out-patient over two years (2010 and 2011). Studying the age and sex, the causative pathogens and their sensitivity and resistance to antibiotics. RESULTS: Age: Under 1 year of age 26 cases (21%), 1–5 years :51 cases (42%). Above 5 years: 37 cases (32%).

**Sex** Females 94 cases (82%), Males 20 cases (18%). The ratio of 4.7:1.

The total number of cases was 114 including: 79 cases of E. Coli(64%), 29 cases of Klebsiella sp.(23%),7 cases of Enterobacter sp.(6%), 5 cases of Proteus sp.(4%), 2 cases of Staphylococcus aureus (2%) and 1 case of Pseudomonas sp.(1%).

The following antibiotics were administered according to the sensitivity of E. Coli and other factors:

Amikacin in 29 cases (36%), Cefixim 27 cases (34%), Amoxy-clav. 13 cases (17%).

Cephtriaxone 4 cases (5%), Cefpodoxime 3 cases (4%), Cefuroxime 3 cases. (4%).

**Conclusion** UTIs are more common in girls and in toddlers.

E. coli is the commonest organism causing UTI followed by Klebsiella sp

\*Parenteral Amikacin was the drug of choice in about one third of cases of UTIs caused by E. coli which were resistant to the previously used antibiotics.

\*Cefixim is the best oral antibiotic followed by Amoxy-clav.