

Conclusions In our study, the majority of children was not hospitalised, which is in agreement with the recent epidemiologic trends in *Clostridium difficile* infection. Antibiotic exposure remains the most common and modifiable risk factor, emphasising the importance of searching CD in this group of children.

PO-0221 EARLY DIAGNOSIS OF SEVERE ISRAELI SPOTTED FEVER

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Introduction Israeli spotted fever (ISF) is caused by *Rickettsia conorii* Israeli spotted fever strain. In Portugal, it was first described in 1999.

Case report A twelve year old adolescent girl was admitted during summer with fever, macular rash (including palms and plants), mild headache, vomits and intense myalgia for three days. She had daily contact with dogs and lived in a rural area in the south of Portugal, but had no history of tick bites or eschar. Within 12 h she was in septic shock with multiorgan dysfunction (hypotension, obnubilation, leukopenia, thrombocytopenia, coagulopathy, respiratory distress, acute renal failure, hepatic dysfunction, hyperbilirubinemia and polyserositis) and was transferred to the intensive unit care. Empirical treatment with doxycycline, ceftriaxone, flucloxacillin and clyndamicyn was initiated. Rickettsial infection was confirmed by serology (over four-fold title increase by indirect immunofluorescence, four weeks after the acute illness – IgM >1024; IgG >4096) and by PCR. Sequencing confirmed the infection caused by *R. conorii* Israeli spotted fever strain. The adolescent evolved favourably with no sequelae.

Discussion Severe cases of Israeli spotted fever have been increasingly reported, mostly in adults. In children, it is usually a mild disease. The mechanism by which ISF strain causes more severe illness remains to be determined. The patient's epidemiology and typical rash facilitated the early clinical diagnosis and prompt empirical treatment, which was probably crucial. The absence of an inoculation eschar should not delay the diagnosis.

PO-0222 THE PATHOGENIC EFFECTS OF GARDNERELLA VAGINALIS ON THE A549 HUMAN ALVEOLAR EPITHELIAL CELL LINE

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Background *Gardnerella vaginalis* is one of the commonest organisms that causes bacterial vaginosis, which is also implicated as a risk factor of preterm birth. This bacterium is also considered the second commonest cause of intrauterine inflammation (chorioamnionitis). Although it creates the characteristic “clue cells” when infecting the vaginal epithelium, the evidence of its pathogenicity on other epithelial surfaces is lacking.

Aim To study the pathogenic changes on the human respiratory tract epithelium as the basis for the understanding of *Gardnerella vaginalis*-induced fetal lung inflammation, which may occur in preterm intrauterine infection.

Methods A549[®] ATCC Human alveolar basal epithelial cell line was grown over an average period of 48–72 h before exposure to *Gardnerella vaginalis* serotype ATCC[®] 14018TM. The multiplicity of infection (MOI) of 100 was used to infect the cell line over a period of 4h. Adherence, apoptosis and cytotoxicity changes were studied using immunofluorescence and light microscopy. Comparisons were also made to *E.coli* and GBS, the common pathogens causing neonatal sepsis.

Results *Gardnerella vaginalis* showed similar adherence to *E. coli*. It has moderate cytotoxicity when compared to GBS. At 4h, co-culturing *Gardnerella vaginalis* with A549 cell line consistently exhibited the presence of apoptosis in more than 50% of the cells as shown using the TUNEL assay. Cytotoxicity was confirmed morphologically with cellular features of pyknosis and elevated LDH in culture supernatant.

Conclusions *Gardnerella vaginalis* exerts some characteristic changes of infection on respiratory epithelium with signs of cytotoxicity, suggesting that the fetal lung could be similarly affected when this bacterium causes intrauterine infection.

PO-0224 ROTAVIRUS GASTROENTERITIS AND NOSOCOMIAL ROTAVIRUS GASTROENTERITIS AMONG CHILDREN AGED UNDER 5 YEARS IN UNITED ARAB EMIRATES: EPIDEMIOLOGY, CLINICAL PROFILE, DEMOGRAPHIC CHARACTERISTICS AND SEVERITY

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Introduction Rotavirus is a leading worldwide cause of acute gastroenteritis (AGE) in young children. This study done to estimate the burden of overall acute gastroenteritis, Rotavirus gastroenteritis (RVGE) and nosocomial RVGE in hospitalised children younger than 5 years of age, and to assess the age and seasonal distribution; duration of hospitalisation and additional hospitalisation associated with hospital-acquired RVGE.

Material and methods A cross-sectional, hospital based study was carried out among hospitalised children with acute gastroenteritis of age <5 years between 2011 and 2012. Demographic profile, clinical characteristics, prior hospitalisation were analysed using SPSS version 20 software. Chi-square test and t-test were used to compare variables.

Results Total Paediatric Admissions (<5 yrs excluding newborn): 2783

RVGE as well as Nosocomial RVGE peaks were observed in the months of January, February and April. The other AGE was noted to peak around May and November months. Nosocomial RVGE increases the duration of hospital stay 6 days vs 2 days.

Conclusion RVGE is highly contagious, and the efficiency of existing prevention measures (such as handwashing, isolation and cohorting) is variable because of numerous barriers to implementation. Prevention of RV infection by mass vaccination could

Abstract PO-0224 Table 1

	AGE	RVGE	Nosocomial RVGE
Total number	970	240	27
Male: Female (%)	56:44	55:45	68:32
Mean age	23.9(15.2)	23.2(14.6)	18(12)
Nationality (most common)	EGYPT (18%)	EGYPT (22%)	EGYPT (28%)

have a positive impact by reducing the number of RVGE cases and thus reducing cross-infections and associated costs.

PO-0225 **SOCIODEMOGRAPHIC PATTERN AND SEASONAL PATTERN OF ROTA VIRUS INFECTION IN CHILDREN UNDER FIVE YEARS OLD**

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Introduction Rotavirus infection is the leading cause of diarrhoea associated with significant morbidity and mortality among children < 5 years of age. We aimed to study the demographic and seasonal pattern of Rotavirus infection among hospitalised children <5 years.

Materials and methods A cross-sectional hospital based study was carried among Children with Acute Gastroenteritis (AGE) aged <5 years over 2 years period. A data extraction form was developed including demographic profile (age, gender, nationality), date of admission etc. Data analysis was performed using SPSS version 20 software. Chi-square test and t-test were used to compare characteristics. P value < 0.05 was considered significant.

Results 970 cases of AGE <5 years was admitted to Paediatric ward during the study period.

Rotavirus cases constituted 24.7% of the total AGE cases and 8.6% of the total paediatric admissions.

Male: female distribution in AGE cases 56% : 44%; similar gender ratio was noted in Rotavirus positive cases.

62% of these cases were <2 years in comparison to other AGE cases (p < 0.001).

The mean age of children with Rotavirus infection was 23.9 ± 14.6 months compared to 30.5 ± 18.8 months other AGE cases (p < 0.05).

Rota virus infection peaks were observed in the months of January, February, April and May.

The other AGE was noted to peak around May and November months.

15% of the cases were UAE nationals, rest expatriates.

Conclusion The common age group affected with Rotavirus infection noted in the present study are in line with other reports from the Middle East, however the seasonality observed varied from previous reports.

PO-0226 **ROTAVIRAL INFECTION ASSOCIATED QUALITY OF LIFE FOR HOSPITALISED CHILDREN AND THEIR FAMILY MEMBERS IN UNIVERSITY CHILDREN'S HOSPITAL IN LATVIA**

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Background Rotavirus is the leading cause of acute gastroenteritis in children worldwide. A quality of life (QOL) study was conducted as a part of a larger study “Clinical peculiarities of rotaviral infection, molecular epidemiology and health associated

QOL for hospitalised children and their family members”, financially supported by Riga Stradins University.

Aim To investigate the impact of rotaviral gastroenteritis (RVGE) on the QOL of affected children and their parents.

Methods Data associated with the burden of RVGE were extracted from questionnaires completed by parents of children (1–133 month of age) hospitalised in University Children’s Hospital within the time period of June 2013 – February 2014. Parents of 165 children evaluated their feelings during child’s illness and estimated child’s physical symptoms and emotions.

Results Mean age of children were 27.96 (SD 22.85) month. Most of parents felt compassion (92%), worries (76%), stress (61%) and fatigue (48%) quite a lot or very much. Such child’s symptoms as diarrhoea (77%), excess fluid intake (69%), apathy or lethargy (64%), vomiting and reduced appetite (55%), fever (50%) parents evaluated as quite a lot or very much experienced as well. In half of the cases a parent or other family member was absent from work because of the child’s RVGE.

Conclusions RVGE has adverse impact on child’s and family QOL, causing not only serious child’s illness, but parental distress, worries, fatigue and inability to work as well. The burden of RVGE on children and their families could be substantially reduced by routine rotavirus vaccination of infants.

PO-0227 **CHARACTERISATION OF CHILDREN WITH ROTAVIRAL INFECTION HOSPITALISED IN UNIVERSITY CHILDREN'S HOSPITAL IN LATVIA**

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Background The incidence of rotaviral gastroenteritis (RVGE) has significantly increased in last 10 years in Latvia.

Aims To assess the impact of family on RVGE.

Methods The study enrolled children (1–23 month of age) hospitalised in University Children’s Hospital within time period of June 2013 – February 2014 if the child has rotavirus positive stool sample. The clinical severity of illness was rated using a clinical scoring system. Parents were interviewed and clinical examination of the child was done.

Results Mean age of 91 enrolled patients was 12.54 (SD 5.74) months. 91.6% of children did not attend kindergarten. There is a tendency (although statistically insignificant, p > 0.05) for breastfed children to have shorter hospitalisation time as well as to have milder clinical severity degree (see Table below).

Abstract PO-0227 Table 1

	Mean duration (days) of treatment in hospital (SD), median	Number of children with moderate dehydration in the first three days of disease
Breastfed children (n = 32)	4.31 (SD 2.64), 3.00	n = 5 (38.9%)
Not breastfed (n = 59)	4.66 (SD 2.37), 4.00	n = 7 (33.3%)

While 73.6% of parents had heard about rotaviral vaccination before, only 1 child was vaccinated against it. 65.9% of parents agreed that children should be vaccinated against rotavirus.