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ACUTE PYELONEPHRITIS IN CHILDREN: EPIDEMIOLOGICAL CHARACTERISTICS AND ANTIBIOTIC SUSCEPTIBILITY PROFILES

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OBJECTIVE: To assess epidemiological characteristics of acute pyelonephritis in children, incidence of vesicoureteric reflux (VUR) and antibiotic susceptibility patterns of uropathogens.

METHODS: We studied 173 children, 67 (39%) boys and 106 (61%) girls, age ranging from 30 days to 14 years (median 2years), suffering from their first episode of pyelonephritis, treated in our institution from 01/01/2000 to 31/12/2002. Imaging evaluation included urinary tract ultrasonography, Power Doppler ultrasonography (PDU), voiding cystourethrogram (VCUG), and dimercaptosuccinic acid (DMSA) renal scan.

RESULTS: One hundred children (58%) were <12 months of age, 37 (21%) 1-4 years of age and 36 (21%) 5-14 years of age. Of the 162 cases that underwent VCUG, VUR was diagnosed in 46 (28%), with a distribution of 27%, 26% and 21% in the three age groups respectively. DMSA was performed in 106 children, resulting in abnormal findings in 75 (71%) and PDU in 83 children, resulting in abnormal findings in 28 (34%). The distribution of isolated uropathogens was: *Escherichia coli* 82%, *Klebsiella* 8%, *Proteus mirabilis* 6%, *Pseudomonas aeruginosa* 2%, *Shigella sonnei* 1% and *Serratia* spp 1%. Susceptibility rates were: ampicillin 48%, amoxicillin-clavulanic acid 87%, cotrimoxazole 68%, aminoglycosides 99%, second-generation cephalosporins 92%, and third-generation cephalosporins 99%.

CONCLUSIONS: The incidence of VUR was similar in each age group. High rates of resistance to both ampicillin and cotrimoxazole were observed. Low levels of resistance in second-generation cephalosporins and amoxicillin-clavulanic acid justify their use for the empirical treatment of pyelonephritis.

