Antibiotic prophylaxis for UTI in children (*N Eng J Med 2009; 361(18):1748-59*)

Antibiotics are widely administered to children with the intention of preventing urinary tract infection, but adequately powered, placebo-controlled trials regarding efficacy are lacking. This study from four Australian centers examined whether low-dose, continuous oral antibiotic therapy prevents urinary tract infection in predisposed children. Children under 18 years who had had one or more microbiologically proven urinary tract infections were randomly assigned to receive either daily trimethoprimsulfamethoxazole suspension (2 mg of trimethoprim plus 10 mg of sulfamethoxazole per kg of body weight) or placebo for 12 months. The primary outcome was microbiologically confirmed symptomatic urinary tract infection. The median age at entry was 14 months; 64% of the patients were girls, 42% had known vesicoureteral reflux (at least grade III in 53% of these patients), and 71% were enrolled after the first diagnosis of urinary tract infection. Long-term, low-dose trimethoprim-sulfamethoxazole was associated with a decreased number of urinary tract infections in predisposed children. During the study, urinary tract infection developed in 36 of 288 patients (13%) in the group receiving trimethoprim-sulfamethoxazole (antibiotic group) and in 55 of 288 patients (19%) in the placebo group. The treatment effect appeared to be consistent but modest across subgroups.

Etiology of pleural effusion in children (*Turk J Pediatr 2009 ; 51(3): 214-9*)

Pleural effusions in children present a changing profile over time, both in terms of etiological subgroups and causative microorganisms in parapneumonic effusions. This retrospective study from Turkey aimed to review pediatric pleural effusions in a large cohort over a 29-year period, with special emphasis on the etiological subgroups and microbiological causes of parapneumonic effusions. The medical records of 492 pediatric patients were reviewed for a comparison of subgroups of pleural effusions and microbiological causes of parapneumonic effusions between three decades. Parapneumonic effusions made up 77.4% of the group. Tuberculous pleurisy decreased, but malignant effusions doubled in number over time. A causative microorganism was identified in 34.6% overall, with *Staphylococcus aureus* and *Streptococcus pneumoniae* being the two most common. Relative frequency of S. aureus decreased, whereas pneumococci and *Haemophilus influenzae* were more frequent in recent years. Periodic review of the causes of pleural effusions and antibiotic sensitivity spectrum of the various agents causing these effusions will help in deciding the antibiotic policy for the same.

Influenza A (H1N1) and vaccination (M*MWR Morb Mortal Wkly Rep 2009; 58(39):1100-1*)

On September 15, 2009, four influenza vaccine manufacturers received approval from the Food and Drug Administration for use of influenza A (H1N1) 2009 monovalent influenza vaccines in the prevention of influenza caused by the 2009 pandemic influenza A (H1N1) virus. Both live, attenuated and inactivated influenza A (H1N1) 2009 monovalent vaccine formulations are available; each contains the strain A/California/7/2009(H1N1)pdm. None of the approved influenza A 2009 (H1N1) monovalent vaccines or seasonal influenza vaccines contains adjuvants. Children aged 6 months to 9 years receiving influenza A (H1N1) 2009 monovalent vaccines should receive 2 doses, with doses separated by approximately 4 weeks; persons aged ≥10 years should receive 1 dose.

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