

Are we overprescribing antibiotics in children with acute lower respiratory tract infections in Sri Lanka?

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Lower respiratory tract infections (LRTIs) in children are a frequent health problem and, although the majority of LRTIs are self-limiting, most of the children who develop them receive antibiotic treatment (1). The main objective of our study was to determine the pattern of antibiotic use among children with LRTIs admitted to paediatric units in a tertiary care centre in southern Sri Lanka. This was a descriptive, cross-sectional study and was conducted over a one-year period from 1 January to 31 December 2013. Data were collected from the parents and the hospital records. Diagnosis was primarily based on the clinical evidence, which was sometimes accompanied by laboratory investigations. Ethical clearance was obtained from the local ethics review committee, and written informed consent was obtained from all of the parents. The data were analysed using descriptive statistics. The study comprised 281 children with LRTIs ranging from one month to 12 years of age, the median age was 27 months, and 173 (62%) of them were boys. There were 54 (19.0%) children with pneumonia, 11 (3.9%) with bronchiolitis, 87 (30.9%) with LRTI plus wheezing and 129 (45.9%) with LRTI without wheezing. Antibiotics were given to 278 (98.9%) of the 281 children. Intravenous antibiotics were used in 200 of 278 (71.9%) children, while oral antibiotics were prescribed for 156 of 278 (56.1%) children, with some children receiving both. Ampicillin was the most widely used intravenous antibiotic in 100 of 200 (50.0%) children, and clarithromycin was the most commonly used oral antibiotic in 85 of 156 (54.4%) children. A total of 13 different antibiotics were prescribed, with some children receiving more than one type of antibiotic. The 278 children who received antibiotics were

prescribed penicillin (119, 42.8%), first-generation cephalosporins (1, 0.4%), second-generation cephalosporins (57, 20.5%), third-generation cephalosporins (57, 20.5%), carbapenems (3, 1.08%), aminoglycosides (48, 17.2%), macrolides (102, 36.7%), co-amoxiclavulonic acid (50, 18.0%) and metronidazole (1, 0.4%). We found that the prescribing of antibiotics remained very high among the children. In spite of the evidence of growing resistance of common pathogens to antibiotics, this trend has been evident in many parts of the world (2). In conclusion, our study found a higher tendency to use new, broad-spectrum antibiotics and to use intravenous antibiotics more than oral antibiotics for lower respiratory tract infections, even though most of these infections are known to be self-limiting and mild.