GP281 TRENDS IN ANTIBIOTIC TREATMENT CHANGES OF HOSPITALIZED COMMUNITY-ACQUIRED PNEUMONIA IN CHILDREN

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10.1136/archdischild-2019-epa.340

Community-acquired pneumonia (CAP) is a leading cause of death in children worldwide. Failure to choose correct antibiotic, dose or treatment duration worsens CAP outcomes and contributes to global antibiotic (AB) resistance.

Aim To analyze and compare antimicrobial treatment among children with hospitalized CAP in year 2012 and 2017.

Methods Retrospective analysis of previously healthy children with hospitalized CAP in 2012(n=85) and 2017(n=96). All cases were divided into CAP during flu and non-flu seasons and subdivided according to age (<2mo, 2–12mo, 1–5y, >5y). Statistical analysis was performed with Microsoft Excel and IBM SPSS Statistics software. P value <0.05 was considered significant.

Results There was no difference in children age, gender and duration of hospitalization between all groups. Most of the cases were hospitalized during the flu season (68% vs 77% in 2012 and 2017 respectively). Significant change in first-line antibiotic therapy was found. The most frequent antibiotics to treat hospitalized CAP in children in 2012 were Penicillin (PEN) (59%), Cefuroxime (CXM) (28%) and Clarithromycin (CLR) (12%). Ampicillin-sulbactam (SAM) was started in 35% of children in 2017 and younger children were more likely to receive it (p=0.047). Decrease in first-line treatment with CXM and PEN was observed in 2017(8% and 38% respectively). Only 12% of children received CLR in 2017. Initial dose of PEN was $0.117 \pm 0.026 \text{ mg/kg}$ in 2012 with slight increase in dosage of $0.125 \pm 0.022 \text{ mg/kg}$ in 2017 (p=0.07) with tendency of higher doses in flu season (p=0.0564). Significant elevation was observed in dosing CLR ($11.49 \pm 3.62 \text{ mg/kg}$ (2012), $17.47 \pm 5.24 \text{ mg/kg}$ (2017), p=0.0344). It was significantly higher comparing between flu seasons

(p=0.0128). AB were changed, dosage increased, or another antibiotic added in 27 cases in 2012, 85% of which were during flu season. CXM was the most frequently used as second-line antibiotic in 2012. Its dose was adjusted, or it was changed in 15 cases and 87% of changes were made during flu season. In 2017, 27 children received AB adjustment with 63% of changes during flu season. Primary antibiotic was shifted to SAM in 65% (n=17) of CAP in 2017 and 71% of the changes during flu season.

Conclusion There was significant change in first-line antibiotic between 2012 and 2017. CAP treatment in 2017 was started with SAM in 35% of the cases and it was most frequently chosen as second-line antibiotic. Higher dosage of antibiotics and antibacterial adjustment in 2012 and 2017 was associated with flu season.

GP282 AN EVALUATION OF THE NORMAL RANGES OF EXERCISE TOLERANCE IN HEALTHY CHILDREN AND ADOLESCENTS AS MEASURED BY THE MODIFIED SHUTTLE TEST (MST)

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10.1136/archdischild-2019-epa.341

Aim The aim of this study was to utilise the Modified Shuttle Test (MST) to determine the exercise capacity range of Irish children and adolescents 5 to 15 years of age. The MST is a well defined test, administered by a trained physiotherapist, following the protocol described by LaLeger.

Methods Children and Adolescents 5–15 years of age with negative bronchial reactivity testing and an absence of underlining chronic respiratory or cardiac disease were eligible for inclusion. The MST has 15 levels, each lasting 1 minute, with incremental increases in speed of 0.61 km/h each minute. The test requires participants to move between two markers, which are 10 metres apart, in time with the beeps from a pre-recorded digital audio track. The test is halted if the participant is unable to continue or fails to reach the 10 meter

Abstract GP282 Figure 1