

**An audit of practices at a tertiary London hospital and a guide for paediatricians**

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**Introduction**

Paediatric Ear, Nose and Throat (ENT) conditions are some of the most common presentations to the health service. Despite their prevalence, the treatment choice in children can often be unclear to those outside the ENT field with antibiotic choice often dependent on hospital guidelines and consultant preference. There are currently few nationally-approved paediatric ENT antibiotic guidelines available and although local hospitals have formed their own there is much debate over the most suitable treatment type for different conditions.

Our aim was to audit the past 5-years of inpatient paediatric ENT cases at St. George's Hospital and review the most common diagnoses and antibiotics used.

**Methods**

Paediatric ENT cases requiring inpatient stay from 01/04/2015 to 01/04/2019 at St. George's Hospital NHS Trust were collated using hospital audit data. Length of stay, the condition treated as well as antibiotic choice were collected and summarised using Microsoft Excel®.

**Antibiotic guidelines for the common ENT diagnoses at St. George's Hospital Trust**

**1) AOM:**

- 1<sup>st</sup> line: Amoxicillin
- 2<sup>nd</sup> line: Clarithromycin

**2) Mastoiditis:**

- 1<sup>st</sup> line Co- amoxiclav if no CNS involvement or Ceftriaxone + Metronidazole if CNS involvement
- 2<sup>nd</sup> line: Discuss with microbiology

**3) Otitis Externa:**

- 1<sup>st</sup> line: Mild: Acetic acid ear drops
- 2<sup>nd</sup> line: Sofradex® ear drops

**4) Tonsillitis:**

- 1<sup>st</sup> line: Phenoxymethylpenicillin or Benzyl-penicillin (if severe disease)
- 2<sup>nd</sup> line: Clarithromycin

**Results**

In the 5 year period, 3265 patients were seen as an inpatient under ENT at St. George's Hospital NHS Trust. Of those 1103 patients received antibiotics.

The most common presentations were acute mastoiditis, tonsillitis, neck abscess (superficial and deep) and acute otitis media and externa infections. The most common antibiotic used was Co-amoxiclav of different concentrations followed by Benzyl-penicillin.

88 patients were admitted with acute tonsillitis who required admission and antibiotics over the time period.

Of those Benzyl-penicillin was the most common given (108 doses) followed by Metronidazole (42 doses), Co-amoxiclav (23 doses), Phenoxymethylpenicillin (18 doses) and Clarithromycin (4 doses).

**Conclusions**

Our data shows antibiotics guidelines are not always being followed for inpatient paediatric ENT cases. Co-amoxiclav is by far the most commonly used antibiotic despite many protocols suggesting other antibiotics as first line.

For inpatient tonsillitis, antibiotics guidelines are in-part being followed but with most cases being classified and treated as severe disease.

Without more national paediatric antibiotic guidelines or greater agreement between clinicians and surgeons further antibiotic divergence and variation may occur.

**Limitations**

The extent of analysis completed was limited by the way the data was coded on hospital systems. Cultures results and antibiotic course lengths were not available from the extracted data.

**Future work**

This work has led to a number of new research opportunities including a quarterly audit looking into antibiotic usage in paediatric post- tonsillectomy and adenoidectomy cases.

Further analysis of subsets of this 5-year period are in the process of being completed with individual analysis of the 5 main diagnoses: Tonsillitis. Otitis Externa, Otitis Media, Deep and superficial neck infections and mastoiditis. We hope to present this data in the near future.

References

