

## **Comparison Between Taste Tolerance of Dexamethasone vs Prednisolone in Children with Acute Exacerbation of Asthma and Multi-trigger Wheeze in an Emergency Department Setting**

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### **Aims:**

Steroids are used in treatment of acute exacerbation of asthma and wheeze to reduce admissions and relapses. Prednisolone is the most widely used steroid. Anecdotally, prednisolone is poorly tolerated by children due to its bitter taste. Previous studies have shown oral dexamethasone (single dose) to be non-inferior to oral prednisolone (3-day course). We investigated the use of dexamethasone as first line oral steroid for children with acute wheeze in a district general hospital emergency department setting, aiming to confirm the hypothesis that with its better taste profile, smaller volume and longer duration of action, dexamethasone was a suitable alternative to prednisolone.

### **Methods:**

As part of standardising management of wheeze in children aged 2-16 through a clinical pathway, we piloted the use of single dose oral dexamethasone (intravenous formulation) mainly focusing on child's tolerance of taste and parental perception of their child's likeability of the drug. Children assessed to have acute wheeze were given either a single dose of dexamethasone or a 3-day course of prednisolone. Tolerance of oral steroids including rates of vomiting was measured using a questionnaire including free text feedback.

### **Results:**

16 patients (mean age - 5.5 years) were prescribed oral steroids for acute wheeze over the study period. 10 children received Dexamethasone and 6, Prednisolone. 3/6 (50%) of children who received prednisolone were admitted and 3/10 children who received dexamethasone were admitted. 2/6 (33%) of children who received prednisolone vomited and 1/10 (10%) of children who received dexamethasone vomited. On a taste rating scale, where 1 is worst taste and 5 is best, the average score for prednisolone was 2.6 and dexamethasone 3.3.

### **Conclusion:**

Single dose oral dexamethasone is well tolerated in acute wheeze in children, and may be more palatable than prednisolone. Comparison involving larger groups of children is needed to investigate this further