REVIEW OF EFFECTIVENESS OF PREMEDICATION IN CHILDREN WITH ADHD AND AUTISTIC SPECTRUM DISEASE

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1. Background/Context

Review of the efficacy of premedication in patients with a diagnosis of autism and/or ADHD at Royal Manchester Children's Hospital prior to surgery.

This review addressed the following questions:

- Did the patients receive a premedication?
- Did it have a good effect or was a second agent required?
- Were there any problems in recovery?
- Was there a delay in discharge?

Patients who had a diagnosis of ADHD or autism and had a general anaesthetic from January 2018-2019, were randomly selected from the Patient Administration System (PAS). Their anaesthetic chart, prescription chart, recovery and post-operative notes were reviewed.

64 patients are included in this review. Twenty (31%) patients received a premedication; midazolam in 18 cases, clonidine in one and a combination of midazolam and clonidine in one.

2. Problem

Twelve patients who received a premedication had a good initial effect (see Table 1). However, there were six patients with a poor effect. Four of these patients had refused oral medication and required IM Ketamine. One patient given midazolam and another given clonidine both cried at induction. Neither received further premedications.

Effect of initial premedication	Number of patients
Good effect	12 (all oral midazolam)
Poor effect	6
Remained anxious but compliant	1
Past good effect	1

7/64 patients (11%) in this review were distressed at induction. 5 (8%) of these had not received any premedications with three requiring parental restraint. The remaining 2 (3%) were those crying despite premedications as described above. Recovery observations could not be performed in 8/64 patients (12%); three had received premedications. One patient who had not received a premedication required further treatment in recovery due to behavioural problems. No patients had a delay in their discharge.

3. Strategy for change

This review showed that midazolam is the commonest premedication used at RMCH. Whilst suitable for many patients, in this cohort, 20% of patients required further premedication.
A premedication plan of dual agents has been recommended in situations of behavioural concerns were more than anxiolysis is desired. (1,2) Review of local premedication guidelines has been undertaken to consider the use of combination of agents in cases of behavioural issues. Recommendations for the use of agents such as clonidine and dexmedetomidine via the nasal route has also been added. (3,4)

4. Measure of improvement

To prospectively audit the effects of premedication in patients with autism and ADHD following the implementation of updated departmental premedication guidelines.

5. Lessons Learnt

A number of patients who have autism and/or ADHD don't require premedications.
In those patients who required a premedication;

- 20% had a failure of a premedication plan due to refusal
- 10% had a failure of premedication due to being ineffective at induction
- 20% had post-operative agitation.

6. Message for others

When prescribing premedication in this sub-group of patients consider the use of a double agent to maximise efficacy and reduce post-operative agitation.

References

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