How do we safely increase day-case tonsillectomy for the treatment of paediatric obstructive sleep apnoea – a cohort analysis

Chang Woo Lee[1], Ashleigh Ivy[1], Brittany Brownlee[1], Mohammed Bahgat[1], Aoife Waters[1], Lakhbinder Pabla[1], Claire Mclarnon[1], Gerard Siou[1], and Steven Powell[1]

[1]Great North Children's Hospital

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Abstract

Background: There is an increasing importance to increasing the day-case rate for children undergoing adenotonsillectomy. The primary aim of this study was to evaluate the immediate post-operative complication (IPOC) rate of children undergoing adenotonsillectomy for the treatment of paediatric obstructive sleep apnoea (OSA), with a view to increasing the day-case rate. IPOC was defined as any adverse clinical events experienced if admitted, or as a re-presentation to the emergency department/ward if done as a day-case, within 24 hours of the surgery. The secondary aim was to evaluate the risk factors predictive of IPOC. Methods: A retrospective analysis of children undergoing adenotonsillectomy for OSA between 01/11/2019–31/03/2022. Results: 464 children were included. Children done as a day-case experienced 0% IPOC (n=260; 220 were planned day-case). Children done as an inpatient experienced 16.7% IPOC (n=34/204). Every child who experienced IPOC had one or more of the following four clinical features: age <3 years, <15 kg, >98th weight centile, significant medical comorbidities. 269 children had none of these four clinical features, and experienced 0.371% IPOC (n=1/269; primary post-tonsillectomy bleed). Children with pre-operative oximetry scores of McGill 3-4 experienced 0% IPOC if they had none of the four clinical features (n=20). The overall readmission rate was 2.80% (n=13/464). Conclusion: Our experience suggests children with none of the four clinical risk factors identified can have adenotonsillectomy performed as a day-case procedure, irrespective of the pre-operative oximetry results. Pre-operative oximetry does not appear to add any additional value in predicting adverse post-operative events.

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