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A systematic review and meta analysis of predictors of airway intervention in adult epiglottitis.

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Epiglottitis is typically considered a pediatric disease however there is growing evidence that the incidence of adult epiglottitis has changed since the introduction of the Haemophilus Influenza vaccine. The literature is composed of multiple small series with differing findings and to date there has been no attempt to collaborate evidence on predictors of airway obstruction in this disease.

Methods:

The population of interest was adults with a diagnosis of epiglottitis. The primary outcome in this review was incidence of airway intervention. A comprehensive literature search was conducted of the Medline and Embase databases and a separate random-effects model meta-analysis was undertaken for all outcome data. Moderator tests for comparison between pre vaccine and post vaccine estimates were made, and absolute risk difference and relative risk calculations were made for all predictors of airway intervention.

Results:

Thirty (30) studies and a total of 10 148 patients were finally included for meta-analysis. A significant decrease in airway intervention was seen post vaccine introduction from 18.8% to 10.9% (p=0.01). The presence of an abscess (RD 0.27, p=0.04; RR 2.45, p<0.001), stridor (RD 0.64, p<0.001; RR 7.15, p<0.001) or a history of diabetes mellitus (RD 0.11, p=0.02; RR 2.15, p=0.01) was associated with need for airway intervention.

Conclusion:

In the post vaccine era clinicians should expect to have to secure airways in 10.9% of cases. The presence of an epiglottic abscess, stridor,or a history of diabetes mellitus are the most reliable clinical features associated with need for airway intervention.

Recent Publications

2019 Dow C, Sideris A, Singh R, Giles M, Banks C, Meller C, Choroomi S, Havas T, A non-inferiority trial: Safety and efficacy of 1:1000 vs. 1:10,000 topical adrenaline in sino-nasal surgery, Australian Society of Otolaryngologists and Head and Neck Surgeons Annual Scientific Meeting, Brisbane, 2019.

2018 Sideris A, Rao A, Jacobson I, Gallagher R, Smee R, Havas T, Salivary Gland Acinic Cell Carcinoma: A Retrospective Cohort Study in the Adult and Paediatric Population, Prince of Wales Hospital, Sydney Children's Hospital, St Vincent's Hospital. Australian Society of Otolaryngologists and Head and Neck Surgeons Annual Scientific Meeting, March 9-11 2018.

2018 Holmes T, Cumming B, Sideris A, Gunner P, Havas T, The Implementation of a Multidisciplinary Tracheostomy Clinical Round at Prince of Wales Hospital: An Audit of its Effectiveness, Ear Nose and Throat Journal, Accepted 2018.

2018 Cumming B, Sideris A, Holmes T, Havas T, Retrospective Review of Orbital Exenteration at Prince of Wales Hospital. Poster presentation at Australian Society of Otolaryngologists and Head and Neck Surgeons Annual Scientific Meeting, March 9-11 2018

2018 Sideris A, Hamze A, Bertollo N, Broe D, Walsh WR, Knee Kinematics in Anatomic Anterior Cruciate Ligament Reconstruction with Four- and Five- Strand Hamstring Tendon Autografts". Orthopaedic Reviews, Accepted for Publication 22 June 2018.

2017 Sideris A, Hamze A, Bertollo N, Broe D, Walsh WR, Five Strand Hamstring Tendon Autograft for Anterior Cruciate Ligament Reconstruction Provides No Benefit over the Gold Standard Four Strand Repair for Anterior Stability of the Knee: A Prospective Cohort Study, Open Journal of Orthopedics, 7, 156-172. doi: 10.4236/ojo.2017.76018.

Biography

Anders Sideris is the Otolaryngology/ Head and Neck Research Fellow at Prince of Wales Hospital in Sydney Australia. He has particular research interests in the field of Head and Neck Oncology, the nexus of biomedical engineering and surgery and is currently involved in early work developing novel methods for sustained local drug delivery in Otolaryngology.

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