

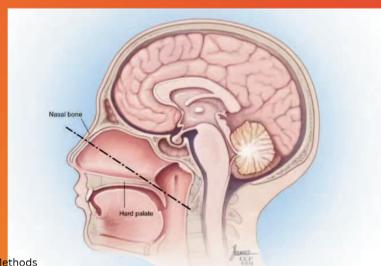
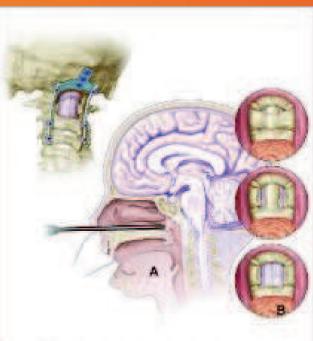
Endonasal Odontoidectomy enables rapid recovery with early extubation, low complications, and short hospital stay.

Introduction

- Ventral craniovertebral junction (CVJ) pathology traditionally treated via morbid transoral/transcranial approaches.
- Endoscopic endonasal odontoidectomy (EEO) offers a direct, minimally invasive ventral corridor.
- Perioperative safety is described, but recovery course (airway, feeding, LOS, complications) is unclear.
- Aim: Synthesize available data to characterize postoperative recovery after EEO.

Results

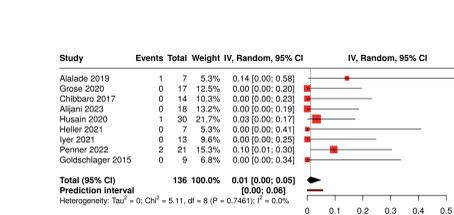
- Early extubation by POD1 in 94% (95% CI 0.87–0.99).
- Airway interventions (reintubation/tracheostomy) required in 4% (95% CI 0.01–0.08).
- PEG or TPN required in 4% (95% CI 0.01–0.08); most patients resumed early oral intake.
- CSF leak rate 1% (95% CI 0.00–0.04); perioperative mortality 2% (95% CI 0.00–0.06).
- Mean hospital length of stay \approx 4–5 days, with moderate heterogeneity ($I^2 = 60.4\%$).



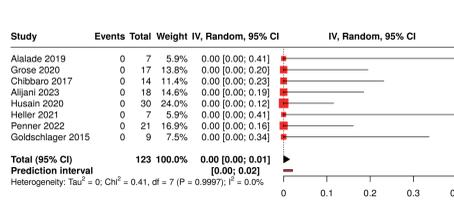
Methods

- PRISMA-guided systematic review of PubMed, Embase, and Scopus through 2025.
- 132 duplicates removed \rightarrow 280 titles/abstracts screened.
- 48 full texts assessed; 39 excluded
- 9 studies, 136 patients undergoing EEO for ventral CVJ pathology.
- Inclusion: \geq 5-patient EEO series with extractable data on extubation, airway interventions, nutrition, LOS, CSF leak, or mortality.
- Two independent reviewers performed study selection and data extraction.
- Proportions pooled using random-effects models with Freeman–Tukey double-arcsine transformation.
- Continuous outcomes (e.g., hospital LOS) synthesized with inverse-variance random-effects; heterogeneity assessed with χ^2 and I^2 .

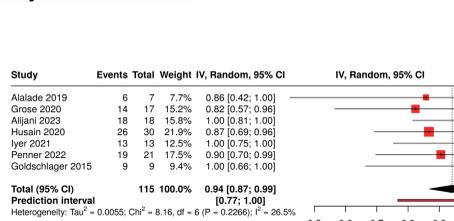
Airway Intervention %



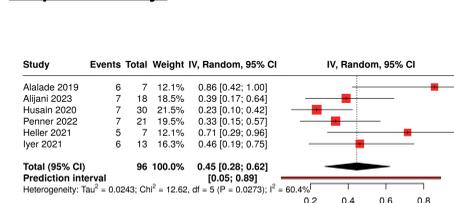
CSF leak rate



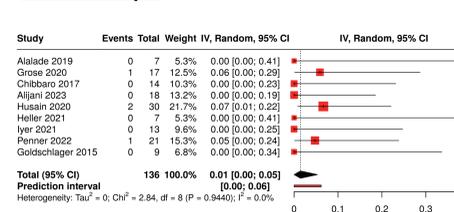
Early Extubation POD1



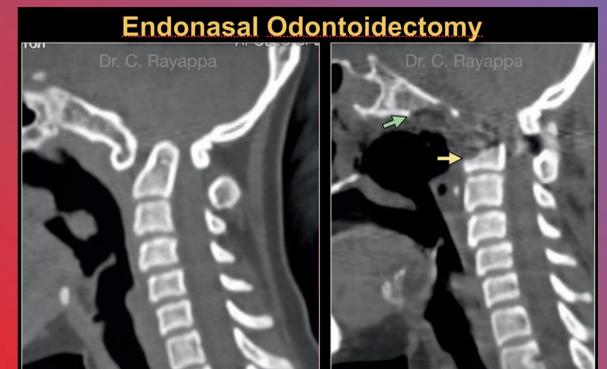
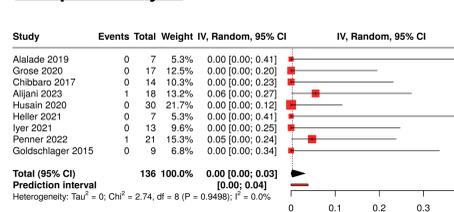
Hospital LOS days



PEG TPN Req %



Periop Mortality %



Discussion

- EEO is associated with rapid postoperative recovery and routine early extubation.
- Very low need for tracheostomy, PEG/TPN, or reintubation indicates a favorable airway and nutritional course.
- Low CSF leak and mortality rates support the overall safety of the procedure.
- Variation in LOS likely reflects institutional protocols and patient comorbidities rather than fundamental limitations of EEO.
- Overall, findings support EEO as a safe, effective strategy for ventral CVJ decompression with predictable, short hospital stays.

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