



What are the Complications following Gastrostomy Placement in Patients with Head and Neck Cancer?: A Systematic Literature Review

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Introduction

- PEG and RIG are insertion techniques used for the provision of enteral nutrition and can be associated with a number of possible complications.
- The superior technique for gastrostomy insertion for patients with head and neck cancer (HNC) remains unclear.
- This systematic literature review aims to answer the question: What are the complications following gastrostomy placement in patients with head and neck cancer?

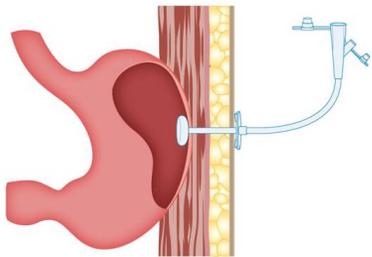


Image: Claire Blake

Methods

- Articles were sourced from the databases PubMed, Scopus, EMBASE and CINAHL, with publication from October 2008 to March 2021.
- Empirical studies which explored the complications of gastrostomy insertion in adult patients with HNC (>18 years) were included.
- Outcomes of interest included procedure related mortality, and major and minor complications.
- Risk of bias was assessed with The American Academy of Nutrition and Dietetics Quality Criteria Checklist
- The Grading of Recommendations Assessment, Development, and Evaluation system was used to examine the certainty of evidence.

Results

	Total No.	Complications		
		Major	Minor	Mortality
PEG	1997	116 5.8%	279 14%	2 0.1%
RIG	424	30 7.1%	53 12.5%	2 0.5%

- In total, 22 studies relevant to the research questions have been identified reporting on 2421 patients.
- Based on the American Academy of Nutrition and Dietetics Quality Criteria Checklist, 16 articles received a positive quality rating with 6 neutral and 0 negative.
- Findings from this review suggest minimal differences in outcomes of interest.

Conclusion

- There were minimal differences in complication rates including major, minor and mortality between PEG and RIG in patients with HNC receiving gastrostomy.
- A 2009 systematic review by Grant et al.¹ has reported mortality rates post gastrostomy insertion of 1% for PEG and 3.9% for RIG. Thus, current findings from this study demonstrate a reduction in mortality over the last 11 years.
- Both PEG and RIG are safe gastrostomy techniques for patients with HNC.
- Selection of appropriate gastrostomy insertion technique requires consideration of patient clinical indications, clinician expertise and available hospital resources.

References

1. Grant DG, Bradley PT, Pothier DD, Bailey D, Caldera S, Baldwin DL, Birchall MA. Complications following gastrostomy tube insertion in patients with head and neck cancer: a prospective multi-institutional study, systematic review and meta-analysis. *Clinical Otolaryngology*. 2009;34(2):103-12.)