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Abstract Discussion Forum **(0)**

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OUTCOMES OF INTRAOPERATIVE NERVE MONITORING DURING ESOPHAGECTOMY; A SYSTEMATIC REVIEW AND META-ANALYSIS.

Society: SSAT

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Introduction

Intraoperative Nerve Monitoring (IONM) is used to locate and protect the recurrent laryngeal nerve (RLN) during esophagectomy. Since esophageal carcinoma has a high incidence of metastasis to the upper mediastinal lymph nodes surrounding the RLN, better prognosis is achieved through dissection of these nodes. This may lead to injury to the nerve causing hoarseness and in severe cases, pneumonia. Utilization of IONM significantly decreases the risk of RLN paralysis, contributing to better postoperative recovery and positive patient outcomes. This study aims to assess the role of IONM in esophagectomy and its implications in prevention of complications during esophagectomy.

Methodology

The review conducted follows the PRISMA guidelines and major medical databases which include PUBMED, Google Scholar and Science-Direct were extensively searched using a a comprehensive search term to identify and retrieve available articles. The articles which assessed outcomes of Intraoperative nerve monitoring during Esophagectomy was included.

The primary outcome of the study was to assess the risk of RLN paralysis following the procedure, other outcomes assessed include the mean difference in duration of hospital stay, duration of the procedure and risk of developing pneumonia. The data was analysed using the Meta, Metadata and the Metafor packages of R studio. The outcomes assessing differences in duration, and the Mean difference between the 2 groups was evaluated using the Inverse variance method. The risk of complications was assessed using the Mantel-Haenszel and the Inverse variance method. The I^2 Test evaluated the heterogeneity of the studies.

Results

The meta-analysis conducted included a total of 10 studies with 1580 subjects. The study highlighted that the risk of developing RLN paralysis was lower in the IONM group in comparison to the control group. There was a 1.34x(0.83-2.14;95%ci ; p<0.01) chance of developing RLN paralysis in the control group. There was a significantly lower duration of hospital stay in the IONM group.[Mean difference = -24.35 (95% ci ; p<0.01)]. The duration of the procedure remained similar in both groups. The risk of pneumonia was significantly lower in the IONM groups in comparison to the control group (0.45 [0.30;0.75; 95% ci ; p<0.01)

Conclusion

The study conducted highlights the outcomes of IONM during esophagectomy promises better patient outcomes and enhances the quality of life of the patients by reducing the risk of RLN paralysis, risk of pneumonia and reduced duration of hospital stay. The utilisation of IONM optimises surgery and and enhances long term impact on quality of life.

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