

Project Title

MBSImP as a Predictor of Clinical Outcomes in Dysphagic Patients with Parkinson's Disease

Organisation(s) Involved

Tan Tock Seng Hospital, National Neuroscience Institute

Project Period

Start date: Jan-2016

Completed date: Sept-2018

Aims

To study the association of oral, pharyngeal and combined scores of the Modified Barium Swallow Impairment Scale Profile (MBSImP) with hospital admissions for pneumonia and choking in patients with PD.

Background

Dysphagia increases risk of pneumonia in patients with Parkinson's Disease (PD), however, no studies have investigated the association between objective measures of swallowing dysfunction and clinical outcomes.

Methods

157 patients who completed MBS were divided into 3 groups based on their feeding modes (oral, enteral, rejected enteral with oral feeding at own risk). Videos were analysed with MBSImP. We evaluated the association of the oral, pharyngeal, and combined scores, with risk of admission for pneumonia and choking. Kaplan-Meier plots and log-rank tests were used to compare survival distributions among three feeding groups. Cox regression models were generated to estimate hazard ratios (HR) and 95% confidence intervals.

Results

Patients in the rejected enteral group scored highest on the MBSImp scale, followed by enteral then oral feeding. Within the rejected enteral group, higher pharyngeal (HR=3.73,p=0.036) and combined scores (HR=1.63,p=0.034) significantly increased the risk of pneumonia and choking. In the enteral feeding group, higher oral subscores (HR=2.16,p =0.011) increased risk for the event, while higher pharyngeal (HR=0.40,p=0.004) subscores reduced risk for pneumonia and choking.

Conclusion

This is the first study to analyse association of MBSImp scores with clinical outcomes in PD patients. Patients who rejected enteral feeding had the highest risk for pneumonia and choking that could be predicted by their MBSImp scores. In the enteral feeding group, this risk was partially reversed. Compliance to feeding modes reduces the risk of pneumonia and choking.

Project Category

Research

Keywords

Tan Tock Seng Hospital, Allied Health, Speech Therapy, Research, Applied Research, Clinical Outcomes, Clinical Outcome Predictor, Patient Education, Dysphagia, Parkinson's disease, Swallowing Dysfunction, Deglutition disorders, Modified Barium Swallow, Modified Barium Swallow Impairment Profile, Pneumonia, Choking, Hospital Admission, Feeding Modes, Oral Feeding, Enteral Feeding, Feeding At Own Risk, Feeding Mode Compliance

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