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Retrospective Review of Fluoroscopic Swallowing Studies and Outcomes at an Academic Health Center

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Introduction: Aspiration is often associated with underlying medical conditions and can cause pneumonia or death. Aspiration risk can be assessed via video fluoroscopic swallowing study (VFSS) or barium swallow (BaSw). We aimed to assess the diagnoses and clinical course of patients who were evaluated for potential aspiration through VFSS or BaSw to determine if there is a degree of aspiration that increases the risk of developing pneumonia and/or death.

Methods: We conducted a retrospective chart review of 374 patients in TJUH who were evaluated via VFSS or BaSw from January 1 to June 30, 2017. We recorded the degree and contents of aspiration, the underlying diagnoses, and evidence of subsequent pneumonia. We then collected data for any future admissions concerning for pneumonia.

Results: Of the 374 patients, 165 had swallowing studies positive for laryngeal penetration or aspiration. Of the 165 patients, 78 patients (47.2%) had evidence of clinical and radiological pneumonia, and 18 of those 78 patients (23.1%) died. We found that 61 of 165 exhibited laryngeal penetration. Of those 61, 23 patients (37.7%) showed clinical and radiological signs of pneumonia, and 7 of the 23 (30.4%) died of aspiration pneumonia.

Discussion: The incidence of pneumonia was considerable in persons with an abnormal swallow and the mortality rate was substantial. Minimally abnormal swallows with laryngeal penetration, but no true aspiration, still had serious consequences. While the incidence of pneumonia was lower (37.7%), there was a substantial mortality rate (30.4%).