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Title: Percutaneous gastrostomy (PEG) insertion under general anaesthesia (GA) in ventilator-dependent patients with neuromuscular disease (NMD)

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Body: Introduction: NMD patients often develop dysphagia and/or aspirate, becoming malnourished, exacerbating weakness. PEG tubes offer nutritional support. Previous studies report poor outcomes for PEG insertion under GA, particularly in patients with severe ventilatory failure. Aim: We examined outcomes of protocolised PEG insertion under GA for ventilator-dependent NMD patients. Methods: Retrospective case review of adult NMD patients with PEGs inserted in our hospital. Results: 27 patients identified:

Diagnosis	N (%)
Amyotrophic Lateral Sclerosis	16 (59)
Duchenne Muscular Dystrophy	10 (37)
Worster-Drought Syndrome	1 (4)
FVC	
>500ml	6 (22)
<500ml	4 (15)
Unable to perform FVC	17 (63)
Pre-Operative Ventilatory Support	
Nocturnal NIV	13 (48)
Diurnal NIV	6 (22)
24-hour NIV	4 (15)
Tracheostomy-ventilation (T-IPPV)	4 (15)

Protocol: PEG insertion under GA via gastroscope using “pull through” method. All patients (unless using T-IPPV) extubated onto NIV post-operatively and monitored for ≥ 1 night on ICU. All received dietetic input and physiotherapy, including use of cough-assist device. Outcomes: 8 complications: 3 local PEG site infections; 1 recurrent PEG blockage; 2 episodes transient abdominal distension on feeding; 2 pneumonias resolving with standard care. No NIV patients re-intubated; no deaths. All patients discharged from hospital. Median length of ICU stay: 1 (range 1-29) days; hospital stay 7 (range 2-121) days. Conclusion: In this group of ventilator-dependent NMD patients, PEG insertion under GA, early extubation to usual ventilatory support, and careful monitoring and multidisciplinary care in the post-operative period, proved safe and effective.