Pediatric NMES and Dysphagia Research

There are only a few pediatric studies that are published at this time that I am aware of. I know that others are in the process but I don't know how close they are to publication. Ours is not quite published yet. We have presented the design and results at ASHA, APA and a few GI conferences. There is a lot of research in the adult population, including randomized control studies (Grade A research) and meta-analyses, etc. As well as more coming down the pike (that I have heard about, no specifics), with at least one other in the NICU.


They presented a case series who failed traditional therapy, then demonstrated significant gains when NMES was initiated. This was NOT published but presented at a NCSHA conference in Charleston.


Larger retrospective study which actually did revealed statistical difference with acquired dysphagia (an acute event) but no statistical difference with congenital, or primary dysphagia (dysphagia from birth or congenital anomalies). It is important to note that subjects were not well matched in severity levels with congenital dysphagic patients as well as age and length of dysphagia, so makes this one a bit tough to compare.


This paper covers 5 pediatric case studies with pharyngeal dysphagia and they all made gains with swallowing skills when NMES was employed as part of the treatment.


Under Review. Here is our information and abstract: randomized control, double blind study with single blind evaluator and 2 year follow up. 18 neonates were included in the study. All failed traditional feeding and swallowing therapy and were eligible for G-tube placement to meet their nutritional and hydration needs. All demonstrated pharyngeal dysphagia to the point it was impacting ability to take oral volumes (significant physiologic stability during oral feeding attempts). Treatment variables the same with exception to sham NMES vs true NMES. Cross-over phase was available for those who did not make significant gains in a 2-week period.
Initial intervention was blinded until completion of 2 year follow up. Single blind evaluator to determine improvements throughout the study, by clinical analysis as well as modified barium swallow study. Results were that the treatment group achieved safe and efficient swallowing faster than the control group. After 2 weeks of therapy, the experimental group demonstrated significantly higher percent to full oral feedings compared the control group. Eight of the 9 control patients needed to cross over into a known "live" unit before significant gains were achieved. Two year follow up indicated that all patients maintained safe swallowing skills.