



Do Routine Nutrition Consults for Neuromuscular Scoliosis Help the Patient or Just the Rankings?

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Kavish Gupta, Stephen Stephan, and Kenneth D. Illingworth have nothing to disclose

Background

- Nutrition consults are widely recommended for preoperative evaluation of neuromuscular scoliosis (NMS) patients
- Although their efficacy remains debatable^{2,3}, these consults are used as a quality measure of hospitals and orthopaedic programs



Background

- Nutrition consults may lead to additional visits and interventions, as well as cost



Objective

To investigate the efficacy of nutrition consults on preoperative weight gain and outcomes for NMS patients undergoing posterior spinal fusion (PSF)

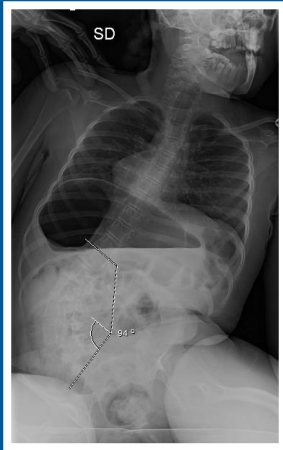
Methods

- Retrospective review
- Consecutive NMS patients undergoing PSF from 2004 - 2018
- Charts reviewed for height and weight at 3, 6 and 12 months prior to surgery, nutrition consultations, methods of nutritional optimization and postoperative complications
- Patients were excluded if there was incomplete height and weight data at the evaluated timepoints



Results

- 243 patients with neuromuscular scoliosis met inclusion criteria
- 46% (111/243) had a preoperative nutrition consult
- 54% (132/243) did not have a nutrition consult



Results

Groups were similar with regards to sex ($p=0.931$), Major Curve ($p=0.144$), & etiology ($p=0.348$) but differed slightly in age ($p=0.003$)

	No Nutrition Consult (n=132)	Nutrition Consult (n=111)	p value
Sex			0.931
Male	55%(73/132)	56% (62/111)	
Female	45%(59/132)	44%(49/111)	
Age at surgery (years)	14.2	13.3	0.003
Major Curve (degrees)	79.5	84.1	0.144
Cerebral Palsy	53.8% (71/132)	47.7% (53/111)	0.348

Results

More patients in the nutrition consult group had G-tubes prior to surgery

	No Nutrition Consult (n=132)	Nutrition Consult (n=111)	p value
G-tube prior to surgery	51/132 (38.6%)	64/111 (57.7%)	0.003
BMI @ time of surgery	18.8	18.9	0.928

Results: Mean Weight Change

No significant difference in mean weight change between group that received a nutrition consult and those who did not

	No Nutrition Consult (n=132)	Nutrition Consult (n=111)	P-Value
12 month Absolute weight change (kg)	1.3	3.5	0.1
6 month Absolute weight change (kg)	1.1	1.9	0.2
3 month Absolute weight change (kg)	0.4	1.1	0.1

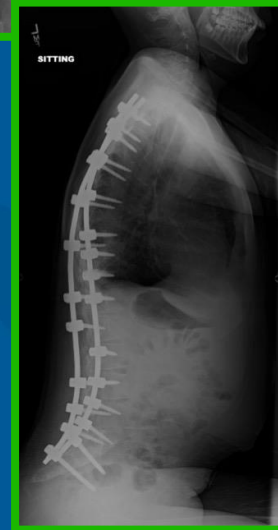
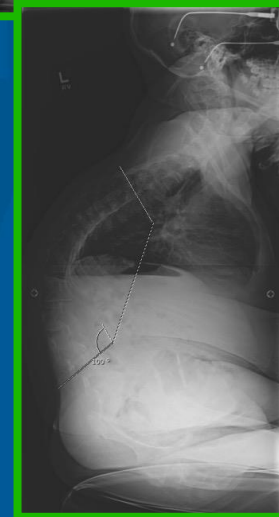
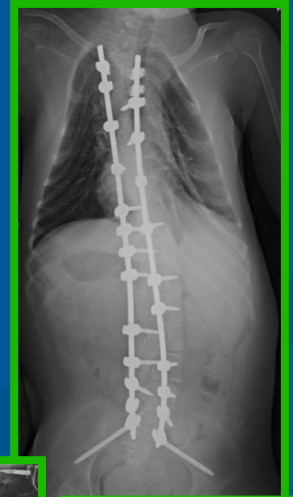
Results: Mean BMI (Body Mass Index)

No significant difference in mean BMI between group that received a nutrition consult and those who had not

	No Nutrition Consult (n=132)	Nutrition Consult (n=111)	P-Value
12 month Change in BMI	0.0	0.1	0.66
6 month Change in BMI	0.1	0.1	0.79
3 month Change in BMI	-0.2	0.1	0.29

Results

- Preoperative nutrition consults led to g-tube placement in 4.5% (5/111) of patients
- Incidence of infection ($p=.52$), implant-related complications ($p=.12$), wound complications ($p=.35$), reoperation ($p=.44$) and length of hospital stay ($p=.08$) between groups were similar



Conclusions

- Nutrition consults did not significantly improve preoperative weight gain
- No statistical differences in rates of infection, implant related complications, wound complications, reoperation or length of hospital stay were detected

References

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