

Short Term HRQOL Results in MCGR and TGR Patients – Divergent from Long Term EOSQ Results in TGR Graduates

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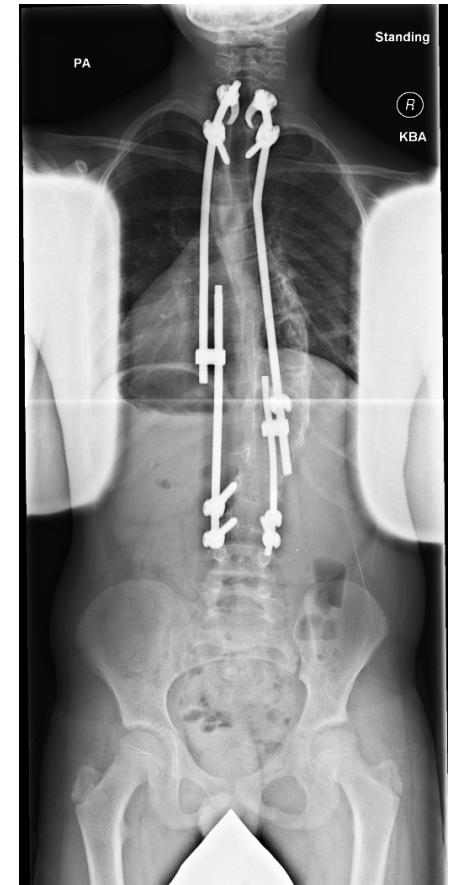
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Background

- Patient-reported EOSQ assesses the impact of multiple surgical lengthening procedures in patients/parents undergoing MCGR and traditional growing rod (TGR) treatments.
- Johnston et al (*JBJS* 2017) reported EOSQ's for 12 TGR graduates, who underwent long-term spinal treatment with multiple lengthenings
 - “Modest” scores of health-related quality of life on all domains on the EOSQ (many domains = 70-90 / 120)

Purpose

To evaluate patient-reported outcomes between MCGR and TGR



Hypothesis

- EOSQ score is anticipated to increase in MCGR patients due to the decrease in # surgical lengthening procedures.



Method

- EOSQ collected from MCGR and TGR patients pre- and post-operatively
- Score total and domains were analyzed between both groups
 - Domains:
 - General health
 - Pain/discomfort
 - Pulmonary function
 - Transfer
 - Physical function
 - Daily living
 - Fatigue/energy level
 - Emotion
 - Parental impact
 - Financial impact
 - Satisfaction

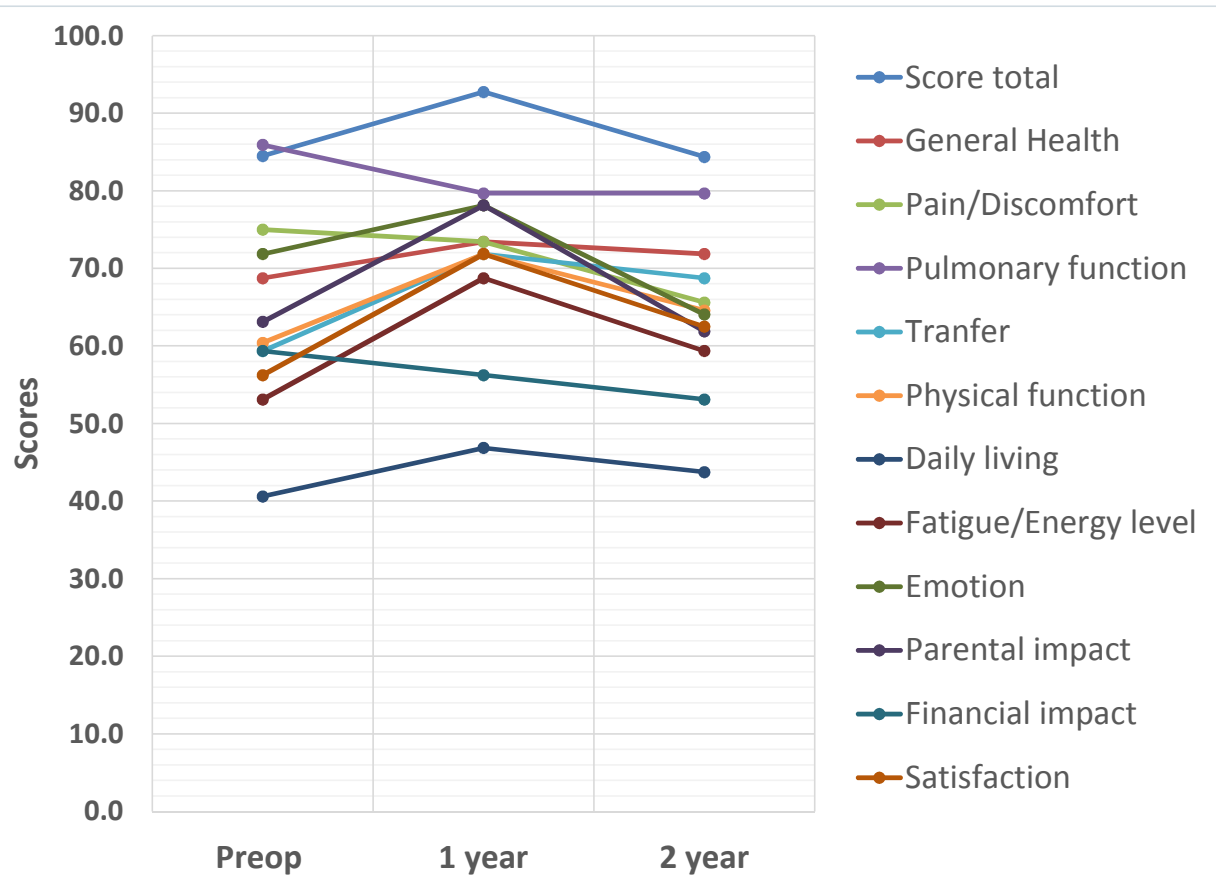
Results

- N=31 patients
- Diagnosis – **even distribution** between MCGR and TGR

Diagnosis	N
Idiopathic	8
Neuromuscular	8
Congenital	7
Syndromic	6
Neurofibromatosis	1
Arthrogryposis	1
Total	31

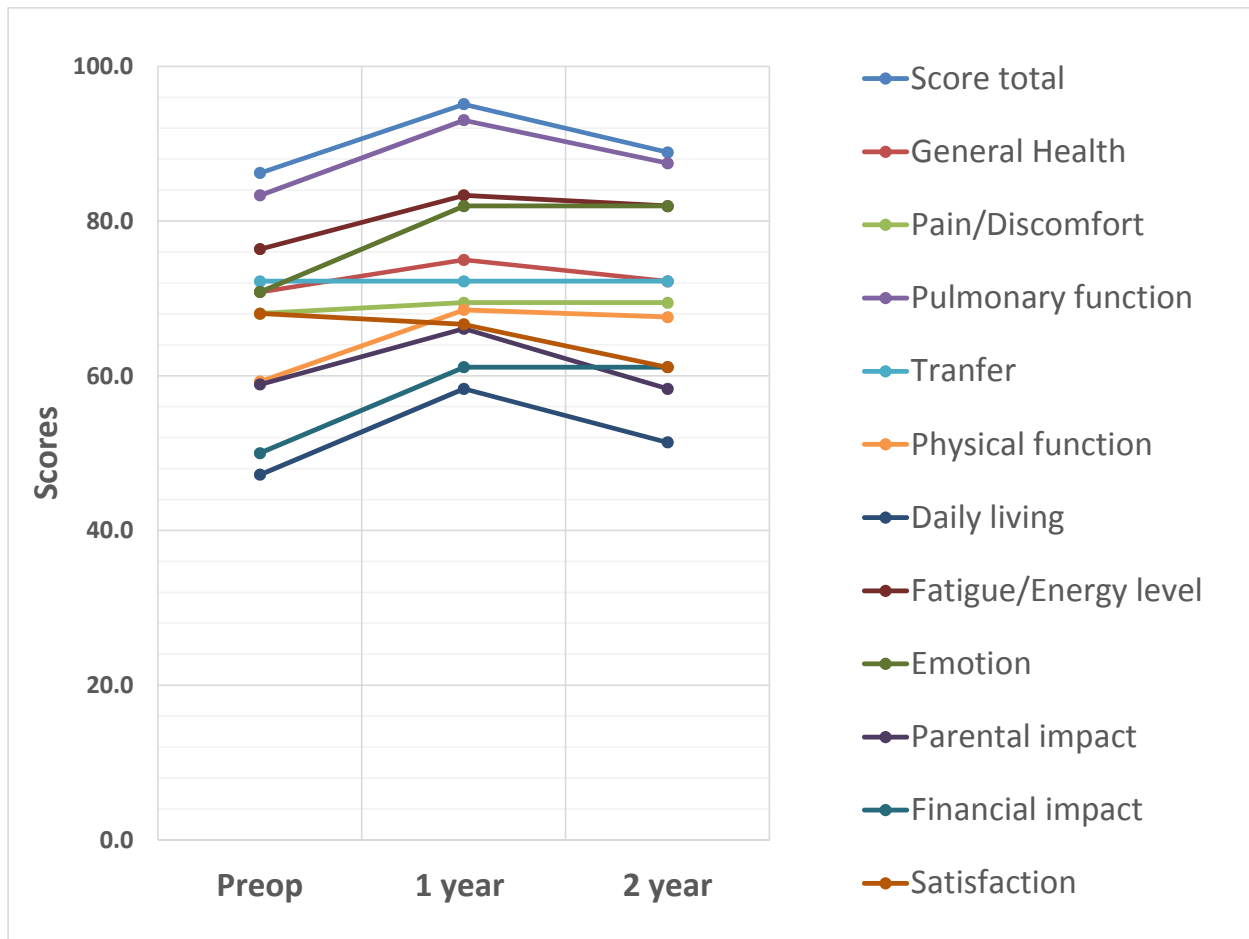
	MCGR	TGR	<i>p</i>
N	18	13	
Age at first surgery	6 (2.9-8.9)	6.4 (2.6-11.2)	0.810
Preop major curve	72.5 (27-108)	86.5 (53-121)	0.116

MCGR: scores at preop, 1-year, 2-year



- No significant changes between preop and postop.

TGR: scores at preop, 1-year, 2-year



• No significant differences preop – > 2 years in any domains

MCGR vs. TGR: preop

	MCGR	TGR	<i>p</i>
N	18	13	
Score total	92.4	86.5	0.271
General health	68.8	68.8	0.861
Pain/discomfort	75.7	70.8	0.483
Pulmonary function	86.1	81.3	0.590
Transfer	76.4	77.1	0.982
Physical function	69.9	64.6	0.606
Daily living	56.3	47.9	0.468
Fatigue/energy	67.4	72.9	0.620
Emotion	80.6	68.8	0.408
Parental impact	71.9	59.2	0.077
Financial impact	70.8	41.7	0.024
Satisfaction	64.6	69.8	0.534

No differences in all domains, except financial impact

→ greater impact on growing rod families.



MCGR vs. TGR: 2-year

	MCGR	TGR	<i>p</i>
N	8	9	
Score total	84.4	88.3	0.314
General health	71.9	69.4	0.664
Pain/discomfort	65.6	63.9	0.957
Pulmonary function	79.7	93.1	0.394
Transfer	68.8	63.9	0.825
Physical function	64.6	68.5	0.708
Daily living	43.8	48.6	0.522
Fatigue/energy	59.4	76.4	0.145
Emotion	64.1	73.6	0.155
Parental impact	61.9	60.0	0.709
Financial impact	53.1	66.7	0.285
Satisfaction	62.5	65.3	0.957

- No differences between groups in any domain.
- Scores <70 in many domains

>2 year postop: MCGR vs. TGR vs. GR graduates

	MCGR	TGR	GR graduates	<i>p</i>
N	8	9	12	
Score total	84.4	88.3	102.2	0.013
General health	71.9	69.4	69.8	0.957
Pain/discomfort	65.6	63.9	76.0	0.439
Pulmonary function	79.7	93.1	91.7	0.291
Transfer	68.8	63.9	79.2	0.639
Physical function	64.6	68.5	84.7	0.228
Daily living	43.8	48.6	78.1	0.0134
Fatigue/energy	59.4	76.4	78.1	0.140
Emotion	64.1	73.6	81.3	0.142
Parental impact	61.9	60.0	82.9	0.008
Financial impact	53.1	66.7	95.8	0.004
Satisfaction	62.5	65.3	80.2	0.246

- Growing rod grads scored higher:
 - Daily Living
 - Parental Impact
 - Financial Impact

Limitations

- Small numbers
- Cross sectional data

Conclusion

- It is anticipated that HRQoL would increase with fewer # surgical procedures, however, our study shows no differences between groups at 2 yr
- Long term follow up of TGR “graduates” → EOSQ scores remain high at most recent visit, suggesting that treatment method may not matter in the long term
- ? GR graduates + parents are demonstrating RELIEF that no treatment required for ≥ 2 years, therefore may have a better perception of outcomes.

Thank You!



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