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IMPROVEMENT IN VOIDING AND BOWEL DYSFUNCTION IN ADULTS AFTER TETHERED CORD RELEASE FOR ADULT TETHERED CORD SYNDROME.

Hypothesis / aims of study
Report improvement in voiding and bowel dysfunction in adults who underwent a tethered cord release for adult tethered cord syndrome.

Study design, materials and methods
Retrospective chart review of patients who underwent a tethered cord release for adult tethered cord syndrome. All patients were evaluated by a basic History and Physical, a lumbar MRI scan, and urodynamic studies. Follow-up ranged from 3 to 10 months. Patients with significant lumbar degenerative disease with a history of or requiring a lumbar fusion were excluded. All patients had a tight filum terminale as the cause of their tethered cord syndrome. 20 patients met the above criteria. There were 14 females, 6 males ranging in age from 40 to 63 yrs old. All 20 patients had voiding dysfunction with 18 having overactive bladder (OAB) symptoms of frequency, urgency, and nocturia with the other 2 having urgency only. All 20 patients had abnormal urodynamic studies. 18 of 20 had a small capacity bladder with elevated urethral sphincter pressures. Urethral sphincter pressures ranged from 70 to 220 cm H2O with a mean of 116 cm H2O. 3 patients had overactive detrusor contractions and urge incontinence. 2 patients had a hyposensitive bladder with large capacities. 17 of 20 had bowel dysfunction. Of these, 7 of 17 had chronic constipation, 7 of 17 had diarrhea alternating with constipation with 2 of these patients previously diagnosed with irritable bowel syndrome (IBS), and 3 had bowel urgency. 2 patients had bowel urge incontinence and 1 patient had both bladder and bowel urge incontinence. All patients had low back pain and 18 of 20 had leg pain. All patients had a filum section to untether the spinal cord via a limited lumbar laminectomy. Results are based on the patients reported symptoms given in the post-op follow-up clinic visits.

Results
The results of surgery are excellent. 19 of 20 had improvement in bladder function with 10 having complete resolution of bladder dysfunction, 6 having significant improvement with some controllable urgency, 3 having improvement and 1 having no change in bladder dysfunction. 14 of 17 had improvement in bowel dysfunction with 7 having complete resolution of bowel dysfunction, 5 having significant improvement, 2 improvement and 3 having no change in bowel dysfunction. 1 patient with IBS had complete normalization of bowel function and the other is improved. All 5 patients with incontinence are now continent. 18 of 20 had improvement in LBP with 4 having no back pain, and 5 had significant improvement, 9 had improvement and 2 had no change in back pain. 17 of 18 had improvement in leg pain with 4 no leg pain, 5 having significant improvement, 8 improvement and 1 no change in leg pain. 2 patients had partial recurrence of their symptoms. No patient had any worsening of their bladder or bowel dysfunction or their back or leg pain There was one post-op wound infection requiring an I&D.

Interpretation of results
It is exciting to report a treatment for some cases of voiding and bowel dysfunction. We report improvement in patients with OAB, IBS, and bladder and bowel urge incontinence. This is an early report with short follow-up though and these results should be viewed with some caution as the length of improvement is unknown at this time. TA has personal patients who are not included in this series who have had lasting improvement at 4 years post-op. Also, there is not objective quantification of the post-op improvement, just the patient's subjective report. While this is weaker then objective data, a patient who at 6 months post-op states they no longer have any incontinence and have stopped using undergarment pads, gets up once per night to void instead of 6 times per night and the diarrhea alternating with constipation present before surgery has resolved is clearly improved. We are initiating a prospective data collection utilizing self-reporting questionnaires as well as pre and post-op urodynamic studies to obtain objective data quantifying the post-op improvement.

Concluding message
Patients with voiding and bowel dysfunction should be asked if they have back or leg pain and if so, consideration should be given to the diagnosis of adult tethered cord syndrome.

References
None

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HUMAN SUBJECTS: This study did not need ethical approval because it was a chart review but followed the Declaration of Helsinki Informed consent was obtained from the patients.