QS01

Trigger Finger Corticosteroid Injections With And Without Local Anesthetic; A Randomized, Double Blind Controlled Trial - A Preliminary Data Analysis

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PURPOSE: Trigger finger (stenosing tenosynovitis) occurs in 2–5% of general population and in up to 10% diabetic patients. First-line treatment involves injection of a corticosteroid, and prior studies have shown cure rates better than 65% with a single injection. Although many surgeons mix local anesthetic with their corticosteroid, the effect of this anesthetic is not clear on the outcomes in treating trigger digits. We conducted a study to compare corticosteroid injections with and without local anesthetic.

METHODS: In this double-blinded, prospective randomized controlled trial patients were treated with either 1 mL triamcinolone combined with 1 mL of 1% lidocaine or 1 mL of corticosteroid with 1 mL of 0.9% saline. To date, 10 patients have been enrolled with 5 receiving corticosteroid-alone and 5 receiving corticosteroid with lidocaine. Pain was the primary outcome, and it was measured using the visual analog scale (VAS) immediately following the injection, and then at 6 hours, 24 hours, and 72 hours after the injection. The efficacy of treatment was also monitored and defined by the need for a repeat injection at 6 weeks.

RESULTS: The two study groups had similar demographics. The injection containing lidocaine with epinephrine had a higher average VAS compared triamcinolone-only at 1 minute (2.4 vs 1.8) and 6 hours (1.4 vs 1.2), and the same pain score at 72 hours (0.4 vs 0.4) intervals. However, there was no statistical significance in this preliminary analysis. There were no adverse outcomes from the injections.

CONCLUSION: There is no significant difference in pain outcomes between the injection approaches. However, the single agent injection has a lower cost and risk by involving only one medication. Based on these initial findings, we recommend the use of an injection without lidocaine to treat trigger finger.

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QS02

A National Longitudinal Comparison of Strip Cranietomy and Whole Vault Cranioplasty

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PURPOSE: Nonsyndromic craniosynostosis can be treated with strip cranietomy or whole vault cranioplasty (WVC). Patients who undergo treatment prior to three months of age can be offered strip cranietomy. After six months, the cranium begins to ossify and whole vault cranioptasies (WVC) yield the most predictable outcomes. Given dichotomous preferences, we conducted a large-scale database comparison of socioeconomic, cost, and complications between treatments.

METHODS: Nonsyndromic craniosynostosis patients were identified in the Kids’ Inpatient Database for years 2000, 2003, 2006, and 2009. To isolate strip cranietomies, patients were limited to those less than 3 months of age with a primary procedure code of 02.03. In order to isolate patients with WVC, patients were limited to those greater than 6 months of age with a primary procedure code of 02.06. Demographics, socioeconomic, charges, hospital characteristics, outcomes, and complications were collected. Univariate and multivariate analyses were performed to compare variables between surgeries and across years.

RESULTS: A total of 251 strip cranietomy and 1,811 WVC patients were captured. Whereas males represented the majority of both cohorts, females comprised significantly more of the WVC (p=0.002). More strip cranietomy patients were White and more WVC were Hispanic and Black (p<0.001). Primary insurance payer was significantly different spanning all years (p<0.001), with more strip cranietomy patients using private insurance (70.13%) and more WVC patients using Medicaid (35.02%). Over the years, WVC trended towards treating Hispanic and Medicaid patients, however, Strip cranietomy cases did not experience any change. WVC charged hospitals $27,962 more than strip cranietomies, with $11,001 independent of payer, income, bedsize, and LOS (p<0.001). Strip cranietomies...
were performed more frequently in the West and Midwest, while WVC were done in the South (p=0.001). Strip craniectomy patients were discharged on average 2.44 days post-operatively while WVC were discharged after 3.83 days. LOS was longer in WVC but not significantly. Outcomes were largely equivocal, with increased accidental puncture (p=0.025) and serum transfusion (p=0.002) in the WVC.

CONCLUSION: Our national longitudinal comparison shows widening socioeconomic disparities between strip craniectomies and WVC. WVC is proving to be a progressive procedure. Not only are they increasingly being performed on under-represented populations, reflecting geographic changes and natural progression over time, but our data also presents evidence supporting improvements in cost and short-term outcomes for WVC. Though we still report lower costs and short-term complications, strip craniectomies are less available to racial minorities and those with Medicaid, with change trending slowly. As we gradually scrutinize medical outcomes, we should continue offer both surgical options to patients. Future efforts should focus on equilibrating these socioeconomic gaps with emphasis on early diagnosis, permitting a choice between procedures.

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QS03
Risk Factors Associated with Post-operative Complications Following Complex Sacrectomy: Outcomes Analysis
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PURPOSE: Sacral disease requiring sacrectomy is relatively rare, and reconstructing the ensuing defects involves challenging decisions. Significant rates of post-operative complications are documented in the literature and a lack of consensus on optimal reconstructive strategies persists. The purpose of this study is to review the experience of a single institution with reconstructing large sacral defects following partial or total sacrectomy, to identify risk factors for sub-optimal outcomes.

METHODS: Following institutional review board approval, a retrospective chart review was conducted looking at postoperative complications following sacrectomy. All patients who underwent partial or total sacrectomy at our institution between December 2009 and March 2017 were included. Data on patient co-morbidities, surgical history, chemoradiation, operative course, and long-term outcomes was collected. A univariate analysis of differences in risk factors between patients with and without various post-operative complications was performed using Fisher’s exact test. All statistical tests were completed with SAS version 9.4 (SAS Institute, Inc., Cary, NC). Significance was defined as p=0.05 and non-significant trends were defined as p=0.15.

RESULTS: A total of 28 patients were included in the study. Average age was 62 years and mean length of follow-up was 20 months. The most common diagnosis leading to sacrectomy was chordoma (39%). Total sacrectomy was performed on 4 patients, while 24 patients underwent partial resection of the sacrum. Complex composite defects, which averaged 1230 cm³ in volume, were most often reconstructed with gluteal-based flaps (n = 15). There was an overall complication rate of 57.1% (n=12) and a 28.6% (n=8) incidence of major complications. There were significantly more flap-related complications in patients who underwent total sacrectomy (p=0.02) and had larger sacral defects (p<0.05). Total sacrectomy resulted in significantly more unplanned returns to the operating room (p<0.01) and hospital stays exceeding 2 weeks (p< 0.01). Interestingly, concurrent colostomy and/or ileostomy showed a trend towards higher rates of infection resulting in abscess (p= 0.06), return to the operating room (p=0.06), and extended hospital stay (p= 0.10). Choice of reconstruction was significantly related to infection resulting in abscess (p<0.05) and return to the operating room (p<0.01). Rectus abdominis flaps were associated with complications in all but one patient.

CONCLUSION: Consistent with other published series, the overall sacrectomy-associated complication rate exceeded 50 percent. Incidence of major complications was lower in our series than previously reported by other groups. Defect volume and sacrectomy type were the strongest predictors of post-operative complications and return to the operating