

relating to transitioning from pediatric to adult care were identified: (1) Poor communication; (2) Uncertainty relating to living life as an adult with hydrocephalus; (3) Anxiety and fear regarding navigating a new health care environment; (4) sadness in the loss of the relationship with the pediatric health care team. Conclusions: We identified a general dissatisfaction with the transitioning process for hydrocephalus. Common themes and concerns identified may form the basis of an improved transitioning model for youth with hydrocephalus as they become adults.

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Tissue plasminogen activator in addition to twist drill drainage as a treatment for chronic subdural hematomas – a descriptive analysis

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Background: Current literature provides little consensus on universal guidelines for first-line treatment of chronic subdural hematomas (cSDH). However, administration of local tissue plasminogen activator (tPA) may enhance the traditional method of twist drill drainage (TDD). The study aims to explore the efficacy of TDD with and without tPA, at achieving clinically relevant drainage (200mL) and reducing recurrence of cSDH. **Methods:** A retrospective review of patients (N=34) with cSDH is presented. Patients who received TDD with tPA (n=17) were identified and matched, based primarily on age and hematoma volume, to a control group (n=17), TDD without tPA. Variables of interest include initial hematoma volume, volume drained, length of stay, and recurrence rates. Descriptive analysis was run. **Results:** Average age for patients was 74.6 with 76% male. Mean drainage volumes for the tPA cohort was 381.6mL and TDD without tPA cohort was 151.3mL. The addition of tPA resulted in drainage volumes nearly double (1.9x) the clinically relevant amount and had low recurrence rates (12.5%). TDD without tPA failed to result in clinically relevant drainage and had a recurrence rate of 52.9%. Average length of stay differed by two days (9.71 tPA; 7.71 control). **Conclusions:** TDD with tPA was effective at treating cSDH in our population.

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Intradural-extramedullary spinal cavernoma with nerve root association: a case report and review of the literature

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Background: Although 5% of cavernomas occur in the spine, intradural-extramedullary cavernomas are exceptionally rare. We

present one such case of cavernoma associated exclusively with a nerve root, and review the literature for similar lesions. **Methods:** Case Report. A 45-year old male patient presented with a six-month history of numbness and paresthesia affecting his lower extremities bilaterally. MRI demonstrated a 16mm intradural-extramedullary lesion at T3-4, compressing the cord. The lesion was surgically removed en-bloc, requiring root sacrifice. The patient's symptoms completely resolved post-operatively, and he remained asymptomatic at 3-month follow up. **Results:** Including the present case, 71 cases of intradural-extramedullary spinal cavernoma have been reported, including 50 with confirmed nerve root involvement. Patients most frequently presented between the ages of 40-59 (41%) with lesions at the lumbar level (54%). Confirmed subarachnoid hemorrhage was present in 14% at presentation, although 23% presented acutely. 49% presented with longstanding/progressive symptoms, and 11% with mixed acute-on-chronic presentation. 37% presented primarily with radiculopathy, 21% with myelopathy, and 11% with pain. Good postoperative recovery was documented in 80% of cases. **Conclusions:** Intradural-extramedullary spinal cavernomas may demonstrate a propensity for radiculopathy at presentation and exhibit substantial subarachnoid hemorrhage risk. Literature review supports the role of surgical resection.

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Work-up and management of asymptomatic extracranial traumatic vertebral artery injury

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Background: Extracranial traumatic vertebral artery injury (eTVAI) is common following non-penetrating head and neck trauma. Most cases are initially asymptomatic with an increased risk for stroke. Consensus is lacking regarding screening, treatment, and follow-up of asymptomatic patients with eTVAI. Our objective was to investigate national practice patterns reflecting these domains. **Methods:** An electronic survey was distributed via the Canadian Neurological Sciences Federation and Canadian Spine Society. Two case-based scenarios featured asymptomatic patients with eTVAI. Case 1: non-displaced cervical lateral mass fracture; angiography stratified by luminal diameter reduction. Case 2: complex C2 fracture; angiography featuring pseudoaneurysm dissection. **Analysis:** descriptive statistics. **Results:** Response Rate: 108 of 182 participants (59%), representing 20 academic institutions.

Case 1: 78% of respondents would screen using CTA (97%), immediately (88%). Most respondents (97%) would initiate treatment, using aspirin (89%) for 3-6 months (46%).

Case 2: 73% of respondents would screen using CTA (96%), immediately (88%). The majority of respondents (94%) would initiate treatment, using aspirin (50%) for 3-6 months (35%). Thirty-six percent of respondents would utilize endovascular therapy.

In both cases, the majority of respondents would follow-up clinically or radiographically every 1-3 months, respectively. Conclusions: This study highlights consensus in Canadian practice patterns for the workup and management of asymptomatic eTVAl.

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Evaluating instability in Degenerative Lumbar Spondylolisthesis: objective variables versus surgeon impressions

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Background: The qualitative Degenerative Spondylolisthesis Instability Classification (DSIC) system defines pre-operative instability associated with degenerative lumbar spondylolisthesis (DLS) and facilitates surgical technique selection. **Objectives:** (1) propose a quantitative DSIC system; (2) compare objective measures to surgeon impressions of DLS-related instability. **Methods:** We conducted a multi-center prospective study of 408 adult patients undergoing surgery for DLS. Variables included in the quantitative classification were assigned point-values based on evidence quality. Scores were converted to DSIC Types: 0-2 points ("Stable"; Type I), 3 points ("Potentially Unstable"; Type II), 4-5 points ("Unstable"; Type III). Surgeons documented impressions of instability using the qualitative DSIC system. **Results:** Five variables were included in the quantitative DSIC: presence of facet effusion, preservation of disc height (<6.5mm), translation (>4mm), kyphotic or neutral disc angle in flexion, and presence of low back pain (LBP) (>5/10 intensity). Surgeons categorized higher degrees of instability than the preliminary quantitative DSIC system, in 130 patients (42%) ($P < 0.001$). Compared to procedures suggested by the quantitative DSIC system, more extensive surgical procedures were performed in 150 patients (57%) ($P < 0.001$). **Conclusions:** A quantitative DSIC system allowed DLS-related stability to be scored and categorized. Patients potentially received more extensive surgery than warranted based on quantitative assessments of stability.

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The nerve root sedimentation sign on MRI is not only correlated with neurogenic claudication: association with leg dominant mechanical pain

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Background: A correlation between the nerve root sedimentation sign (SedSign) and neurogenic claudication has been

demonstrated; though it did not account for leg-dominant pain. This study analyzed the utility of SedSign to diagnose leg-dominant pain using validated classification systems. **Methods:** We retrospectively reviewed prospective data from 367 patients with back or leg pain collected between January 1, 2012 to May 31, 2018. Baseline characteristics included SSPc (Saskatchewan Spine Pathway classification), Oswestry disability index (ODI), visual analogue pain scores (VAS), and EuroQol Group 5-Dimension Self-Report (EQ5D). Inter- and intra-rater reliability for SedSign was 73% and 91%. **Results:** SedSign was positive in 111 (30.2%) and negative in 256 (69.8%) patients. Univariate analysis showed a correlation between SedSign and age, male sex, ODI, EQ5D, cross-sectional area (CSA) of stenosis, antero-posterior diameter of stenosis, and leg-dominant pain; negative SedSign was correlated with back-dominant pain. Multivariate analysis revealed an association between SedSign and age, male sex, CSA stenosis, and ODI walking distance. The sensitivity, specificity, positive and negative predictive values of SedSign for leg-dominant pain were 33.5%, 83.2%, 77.0%, and 57.3%. **Conclusions:** SedSign has high specificity but low sensitivity for leg-dominant pain. Despite a similar correlation between SedSign and neurogenic claudication or sciatica, significance was lost on multivariate analysis.

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An exploration of the evolving perception of quality of life from the perspective of individuals living with a cervical spinal cord injury in Nova Scotia

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Background: Spinal cord injuries invoke enormous life changes for the individual, with impacts not just on physical functioning, but social and psychological well-being. Individuals learn to deal with these changes, and handle these new stressors in different ways. Extant literature suggest the majority of people eventually attain a quality of life (QoL) similar to able-bodied individuals. We sought to validate these observations in a contemporary cohort and specifically explore how patients' perceptions evolve over time. **Methods:** We conducted hour-long semi-structured interviews with 15 individuals living with cervical spinal cord injuries. Interviews took place over the telephone or virtually via MS Teams. Interview transcripts were then analyzed using an iterative coding process and thematic analysis (NVivo). **Results:** The over-arching journey that most participants described was a continuous evolution in QoL, as they learned to adapt and function with their injury. However, these trajectories were disparate and heavily reliant on personal supports and resources available, their psychosocial environment and inherent coping strategies. **Conclusions:** This study emphasizes the unique nature of each person's journey, and not all people attain a satisfactory QoL. Our approach needs to be individualized, adjusting to specific circumstances, in order to provide more inclusive and supportive care.