contusion injuries. This tissue sample is collected and submitted for histopathologic analysis.

RESULTS: 24 hours post severe contusion/compression injury in a pig model, hematoxylin and eosin-stained (H&E) paraffin sections revealed myelin and axonal degeneration along with numerous scattered spheroids (swollen axons) with hemorrhage and acute inflammation at the wound site. Surgical pathology reports document neuropil disruption and devitalization in samples collected during surgery at 40 and 82 hours post-injury. In the patient implanted at 40 hours, the tissue specimen contained fragments of disrupted neuropil with swollen and fragmented axons as evaluated by H&E and neurofilament immunohistochemistry.

CONCLUSION: Severe SCI leads to the rapid formation of irreversibly damaged parenchyma. Our findings in animal and human tissue samples revealed acute tissue disruption and devitalization within 24–82 hours post-injury. This time frame was too short to appreciate phagocytosis, gliosis, or axon sprouts. Future patient enrollment and tissue collection in the ongoing clinical study will continue to build upon these initial observations.

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Circumferential Correction of Post-infectious Thoracolumbar Deformity in High-risk Patients with Active Osteomyelitis
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INTRODUCTION: Post-infectious deformity is a rare complication of osteomyelitis of the spine. Non-operative or limited operative treatment with debridement is usually futile due to destruction of the anterior column. Major reconstructive surgery may be a large undertaking with high morbidity. We describe our experience and outcomes with circumferential correction and fusion for patients with post-infectious deformity.

METHODS: A retrospective review of 10 consecutive patients who underwent a three-column osteotomy for thoracolumbar deformity due to bacterial osteomyelitis during an 18-month period is reported. Preoperative data included ambulatory status, CCI, clinical and infectious data, and VAS scores. Complications are reported. The severity of their immediate postoperative condition is reflected by the SAPS II score. Outcome variables included VAS scores, ambulatory status, ability to care for self, and return to work status and imaging.

RESULTS: The mean age was 60.5 ± 6.6 years. All patients had refractory back pain, were unable to ambulate and had confirmed diagnosis of a spinal infection. The median CCI was 5 (range, 1–8) and mean VAS was 8.7 ± 1.8. All patients underwent a 3-column osteotomy with an average number of 8 levels fused. The mean EBL and operative time was 4200 mL and 8.6 hours respectively. The median SAPS II score was 25 (range, 15–52). The median ICU and total hospital stay was 4 and 13 days respectively. The most common complication was intraoperative hypotension requiring vasopressor support. Postoperative VAS was reduced to 1.5 ± 1.06, and all patients except one (preoperative paraplegia) regained ambulatory status. Mean preoperative segmental kyphosis of 30 ± 11 degrees was corrected to 10 ± 7 degrees.

CONCLUSION: This study suggests that extensive circumferential reconstruction for deformity originating from bacterial discitis, although a massive procedure, is effective in restoring these very sick patients to self-care and ambulatory status. Extensive reconstruction is feasible and should be considered even during the acute phase of these complex infections, especially considering how debilitating the added components of instability and deformity.

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Online Resources Provide Inconsistent Return To Play Instructions Following Concussion
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INTRODUCTION: While recent guidelines have hoped to form consensus regarding management of concussion, it is unclear if they have been effective in conveying this information to the public. Many parents and athletes obtain medical recommendations via the internet. This study aims to evaluate consistency between online resources and guideline statements in post-concussion return to play (RTP) decisions.

METHODS: Five websites were selected through a Google search for return to play after concussion. These websites represented a federal government institution (Centers for Disease Control, CDC); a national high school association website (National Federation of State High School Associations, NFHS); a popular nationally-recognized medical website for patients (WebMD); a University hospital (University of Michigan, UM); a popular parent-driven website for sports parents (Mom’s Team, MT); as well as a website for a private concussion clinic (Sports Concussion Institute, SCI). The Zurich Sport Concussion Consensus Statement was used as the gold standard for RTP recommendations, and eight specific items identified. Three independent reviewers graded each website for each of the eight recommendations (A = states guideline recommendations appropriately; B = mentions guideline recommendation; C = does not mention guideline recommendation; F = inappropriate recommendation made).

RESULTS: A grade of A was assigned for 45.8% of recommendations, B for 25.0%, C for 25.0%, and F for 4.2%. All websites were assigned grade A for recommendation of no return to play on the day of injury. Only 1 website (WebMD) commented on medication usage in conjunction with the Zurich Statement, and only 2 websites (SCI, UM) commented on management of persistent symptoms. No website correctly commented on all eight guideline recommendations.

CONCLUSION: Online resources are inconsistent in relaying guideline recommendations for RTP. This is a potential source of confusion in management of concussion for athletes and their parents which may result in inappropriate RTP.

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Stereoelectroencephalography for Refractory Localization-related Epilepsy: Initial Experience in 50 Patients
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INTRODUCTION: Patients with pharmacotherapy-resistant localization-related epilepsy (LRE) may be candidates for surgical intervention if the seizure onset zone can be well localized. Long used