Rehabilitation in Post-Acute Anterior Shoulder Dislocation

Take Home Point: This study suggests that routinely referring patients to a program of physical therapy is not superior to a single session of advice, supporting materials, and option to self-refer to physical therapy.

Citation: Kearney R, Ellard D, Parsons H, et. al. Acute rehabilitation following traumatic anterior shoulder dislocation (ARTISAN): pragmatic, multicentre, randomised controlled trial. *BMJ*. 2024 Jan 17:384: e076925. doi: 10.1136/bmj-2023-076925.

Relevance: Shoulder dislocations commonly present to urgent care (UC). There is, however, scarce data regarding amount or timing of rehabilitation post injury.

Study Summary: This was a pragmatic, superiority, randomized multicenter controlled trial conducted at 41 hospitals within the United Kingdom's National Health Service (NHS). All participating sites received an initial training session from a trial research physiotherapist (PT) and an initial period in which the injured arm was supported in a sling. Participants were randomized sequentially on a 1:1 basis to either a one-time advice session or to an advice session plus the additional PT. Those in the advice-only group were provided with an option to self-refer to the clinical team if recovery did not occur. The primary outcome was the Oxford shoulder instability score at 6 months.

The authors identified 482 participants who were randomly assigned to either advice only (n=240) or to advice and a program of PT (n=242). They found no significant difference in Oxford shoulder instability scores between the 2 groups at 6 months. Complication profiles were similar across the 2 groups as well and no significant differences between rotator cuff tears, compression fractures of the shoulder, shoulder re-dislocations, frozen shoulders, and nerve damage between the groups.

Editor's Comments: There was a high proportion (27%) of participants that were lost to follow-up. Post-hoc analysis which imputed data to account for this occurrence, delivered similar results. There was a low re-dislocation rate in this study, when compared to previous observational studies. This study does suggest that routine and regimented follow-up may not be necessary for patients with anterior shoulder dislocation. It is also common practice for patients with shoulder dislocations to be referred to orthopedic surgeons, and the utility of this practice was not evaluated in this study. ■

Prepared by Ivan Koay MBChB, MRCS, FRNZCUC, MD; Urgent Care Physician and Medical Lead, Kings College Hospital Urgent Treatment Centre, London; Convenor Ireland and UK Faculty of the Royal New Zealand College of Urgent Care; Independent Assessor European Reference Network, Andalusian Agency for Healthcare Quality

Are There Differences in Recovery Between Sports vs Non-Sports Related Concussion?

Take Home Point: Functional limitations 6 months after injury were common after sports-related traumatic brain injury (TBI), even in the case of mild sports-related TBI.

Citation: Ntikas M, Stewart W, Ietswaart M, et. al. Contrasting Characteristics and Outcomes of Sports-Related and Non–Sports-Related Traumatic Brain Injury. *JAMA Network Open*. 2024;7(1):e2353318. doi:10.1001/jamanetworkopen.2023.53318

Relevance: Sports-related TBI is a common presentation to both emergency departments (EDs) and UCs, and long-term consequences of these injuries are still being elucidated.

Study Summary: This was a prospective, longitudinal, cohort study that enrolled patients with TBI from 18 European countries. Inclusion criteria were presentation with TBI within 24 hours of injury, a clinical indication for computed tomography (CT), and availability to consent. Follow-up for all patients was scheduled for 3 and 6 months either face-to-face, by postal questionnaire or telephone interview. The main outcome was global functional outcome at 6 months with secondary outcomes covering post-concussion symptoms, health-related quality of life, and mental health.

The authors enrolled 4,360 participants. 256 (6%) subjects had sports related TBI (SR-TBI) and 4,104 had non-sports related TBI (NSR-TBI). They found that participants with SR-TBI were significantly younger and were over twice as likely to have a university or college degree. Subjects

with sports related concussion were 2.38 times more likely to be classified as healthy before their injury (P = .001) and were also 1.59 times less likely to have a major extracranial injury (P = .02).

52% of patients with SR-TBI had an incomplete recovery at 3 months after injury, and 46% of patients with mild SR-TBI were still not fully recovered at 6 months. At 3 months after injury, the SR-TBI group had fewer impaired outcomes on scales assessing anxiety and PTSD than those with NSR-TBI.

Editor's Comments: This study setting (level 1 trauma centers) limits its generalizability. All patients had CT imaging studies implying more severe mechanisms of injury than commonly seen at many UC centers. As the majority of patients with head injuries can have clinically significant TBI (ie, requiring surgical intervention) excluded using a clinical decision rule (rather than CT scan), there is an opportunity for UC clinicians to study this less severely injured cohort. It is unclear, additionally, whether patients with SR-TBI had better recovery because of the mechanism of injury or because of better underlying health status at the time of injury. ■

Will Parents Accept Treating their Child's Pneumonia without Antibiotics?

Take Home Point: Interventions for antibiotic stewardship in children require parental and clinician buy-in. Non-treatment with antibiotics for pediatric pneumonia is not a familiar concept for parents. Parental assent to this approach requires trust in the care team and a preference for medication avoidance.

Citation: Szymczak J, Hayes A, Labellarte P, et al. Parent and Clinician Views on Not Using Antibiotics for Mild Community-Acquired Pneumonia. *Pediatrics*. 2024;153(2): e2023063782

Relevance: It is well established that the majority of childhood pneumonia cases in pre-school aged children are viral in etiology. Thus, there is growing evidence that community acquired pneumonia (CAP) in children might be managed without antibiotic therapy in many cases, however, changing clinical practice in this area remains a challenge due to the views of both parents and clinicians.

Study Summary: This was a qualitative study using semi-structured interviews conducted at Ann & Robert H. Lurie Children's Hospital in Chicago, Illinois, by an interdisciplinary investigator group with expertise in CAP. Interviews were conducted with parents or legal guardians of children who were diagnosed with CAP in the ED or outpatient setting. Interviews were also conducted with clinicians who practice in pediatric EDs, general EDs, or general pediatric outpatient settings.

The authors interviewed 18 parents/caregivers and 20 clinicians (10 pediatric ED physicians, 2 general ED physicians, and 8 general pediatricians). All parents reported that their child received antibiotics to treat their most recent episode of CAP. None of the parents in the sample were familiar with the strategy to manage CAP with no antibiotics. In the study, 11 (55%) clinicians were familiar with the recommendation that antibiotics are not routinely required for preschool-aged children with mild CAP, most of whom were ED clinicians (81%). All respondents acknowledged the importance of only using antibiotics when necessary. The cultural meaning of CAP as a serious illness, diagnostic uncertainty, fear of respiratory symptoms in young children, contextual factors surrounding each clinical encounter, and consequences of undertreating a bacterial infection contribute to a willingness to accept the risks of antibiotics (by both cohorts) even if there is a low likelihood they are needed. This underscores the influence of clinician–parent communication on antibiotic prescribing.

Editor's Comments: This study was a single centered study in an urban American quaternary care center, which limits its generalizability. The investigators were inquiring about hypothetical non-prescribing and opinions may have been different if the study examined true differences in CAP treatment. The study highlights how parents are unfamiliar with guidelines and any discussions of non-treatment with antibiotics are likely to meet resistance if this understanding is not brought to the bedside by treating clinicians. ■

Topical Lidocaine Does Little For Neck Pain

Take Home Point: There was a small but not statistically significant difference between lidocaine patches and placebo in the relief of neck pain in this study.

Citation: Cohen S, Larkin T, Weitzner A, et. al. Multicenter, Randomized, Placebo-Controlled Crossover Trial Evaluating Topical Lidocaine for Mechanical Cervical Pain *Anesthesiology*. 2023 Dec 11. doi: 10.1097/ALN.0000000000004857.

Relevance: Increasingly, evidence is pushing practice toward non-opioid treatment of chronic neck and back pain. Yet, there are few evidence-based treatments that have proving effective for easing neck and back pain.

Study Summary: This was a randomized, double-blind, placebo-controlled crossover trial at 4 U.S. military, Veterans Administration, academic, and private practice sites. The authors studied only 76 patients who were randomized to receive either placebo followed by lidocaine patch for 4-week intervals or a reverse lidocaine-patch-then-placebo sequence. The primary outcome measure was mean reduction in average neck pain. A positive outcome was designated as a ≥2-point reduction in average neck pain coupled with a ≥5 score on the 7-point Patient Global Impression of Change scale at the 4-week endpoint of the study.

The authors found the median reduction in average neck pain score was -1.0 (interquartile range [IQR] -2.0, 0.0) for the lidocaine phase vs. -0.5 (IQR -2.0,.0) for placebo treatment (p=0.17). By comparison, 27.7% of patients experienced a positive outcome during lidocaine treatment vs. 14.9% during the placebo phase (p=0.073). Also, side effects were experienced in 27.5% of patients in the lidocaine group compared to 20.5% in the placebo group, the most common of which was pruritis (p=0.036).

Editor's Comments: This was a small study due to practical issues from recruitment perspective during COVID, and enrollment was halted prior to fully recruiting the proposed number of patients due to the expiration of the patches. This meant that the study was underpowered to detect small differences in pain relief. The authors do suggest that future studies may consider applying different lidocaine formulations with greater penetrance that may provide better clinical benefit. This was also a study of patients with chronic neck pain, which is physiologically different than acute neck pain, which is more commonly managed in UC settings. However, lidocaine patches showed good tolerance and a signal of benefit. There is little drawback to including this in a multimodal analgesia approach toward the treatment of musculoskeletal pain. ■

Long COVID: CBT Helps Chronic Fatigue Symptoms

Take Home Point: Cognitive Behavioral Therapy (CBT) helped in reducing fatigue in patients suffering from long COVID and the effects were sustained after a 6-month period.

Citation: Kuut T, Müller F, Csorba I, et. al. Efficacy of Cognitive-Behavioral Therapy Targeting Severe Fatigue Following Coronavirus Disease 2019: Results of a Randomized Controlled Trial. *Clin Infect Dis.* 2023 Sep 11;77(5):687-695. doi: 10.1093/cid/ciad257

Relevance: Long COVID is an increasingly recognized clinical entity with poorly understood pathophysiology and even fewer treatment options. CBT is a safe, well studied intervention with a variety of indications, and seems a reasonable option in conditions with large affective components, such as long COVID.

Study Summary: ReCOVer was an investigator-initiated, 2-arm, multicentre randomized controlled trial conducted in the Netherlands. Eligible patients were diagnosed with a symptomatic, laboratory confirmed SARS-CoV-2 infection with severe fatigue that began or worsened directly after the onset of symptoms of COVID-19. Participants were randomly assigned in a 1:1 ratio to either receive CBT or usual care as a control group (CG). All participants completed a baseline questionnaire and CBT was initiated 2 weeks after enrolment and continued for 17 weeks. Follow-up questionnaires were done after the CBT period and subsequently 6 months later.

The authors recruited 114 patients: 57 CBT and 57 CG patients. They found patients who reported severe fatigue 3–12 months following COVID-19 had significant improvement in fatigue after CBT compared with participants in the CG. These positive effects of CBT were sustained for 6 months after the intervention. The CBT patients were also less often severely and chronically fatigued and reported fewer concentration problems, less severe somatic symptoms, and improved physical and social functioning across both of the follow-up assessments.

Editor's Comments: Due to the nature of the study, blinding participants was not possible. There may be limited generalizability to other COVID patients as all participants in this study did not require hospitalization for their illness and was limited to the Netherlands. The reporting of fatigue was subjective in nature to individual patients with no measurable biomarker for fatigue available.

Monoclonal Antibodies Have Potential to Treat Long COVID

Take Home Point: In this small case series, participants with long COVID who received monoclonal antibody (MCA)

infusions against SARS-CoV-2 all showed rapid improvement in long COVID symptoms.

Citation: Scheppke KA, Pepe PE, Jui J, et al. Remission of severe forms of long COVID following monoclonal antibody (MCA) infusions: A report of signal index cases and call for targeted research. *Am J Emerg Med*. 2024;75:122-127. doi:10.1016/j.ajem.2023.09.051

Relevance: Long COVID has few proven treatment options and can be highly debilitating.

Study Summary: This was a case report of 3 index cases of middle-aged patients who developed long COVID symptoms. They were all treated with casirivimab/imdevimab cocktail MCA infusions. In each case, MCA infusions were intended to help prevent worsening of the chronic conditions following a new COVID-19 exposure. In all 3 cases, long COVID symptoms had been severely debilitating and unrelenting. The authors documented the reported symptoms of each patient in narrative style.

Each person had the same complete (and sustained) rapid remission within 5–7 days of MCA administration regardless of age, sex, medical history, or duration of long COVID. These improvements in fatigue and cognitive issues remained for at least one year of follow-up. Among other cases being followed by the investigators, MCA infusions did not improve long COVID patients with isolated (but persistent) anosmia/dysgeusia.

"This certainly shouldn't prompt a change in standard of care, but for recalcitrant cases of long COVID, MCA could be considered."

Editor's Comments: This was a small case series and there was no control group. As such, it is unclear if there may have been a placebo effect. Additionally, symptom improvement was entirely subjective and there were no objective scoring systems used to grade the patients' change in symptoms. This certainly shouldn't prompt a change in standard of care, but for recalcitrant cases of long COVID, MCA could be considered. This study certainly warrants a follow-up randomized trial to evaluate for the magnitude of actual treatment effect. ■