

Prize Winning Abstracts BASEM Conference 2018

1 THE INTEGRITY OF THE SCAPHOLUNATE LIGAMENT IN COMPETITIVE DIVERS

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Aim Wrist pain and injury is common condition in competitive, elite divers. Literature has shown that divers sustain high impacts of force through the wrists on water entry. It is likely this and the repetitive nature of the sport that results in wrist injuries.^{1, 2} No studies have yet looked at the structures injured when divers have wrist pain. This study was conducted to ascertain the demographics of the diving population within the United Kingdom at competitive level and how many of them experienced wrist pain. It was also used to investigate if one of the crucial stabilising ligaments in the wrist was disrupted, the scapholunate ligament (SLL).

Methods Data was collected at the British Diving Championships, 2018. 51 divers were eligible for inclusion and 43 divers took part. Two divers were excluded due to previous wrist surgery. Participants completed a questionnaire on diving career to date and wrist injuries. They then underwent wrist examination using Watson's test and ultrasound imaging of both SLL.

Results This study found that 78% of divers had disruption of one or both SLL. Of these, 65.9% had disruption of the ligament in the supporting hand rather than the entry hand. No significant difference was found between springboard and platform divers. Those divers who taped were found to reduce ligament disruption by 28 times over those who did not (OR 27.9, 95% CI 3.31 to 234, P=0.002). It was demonstrated that Watson's test has poor sensitivity and specificity, with reasonable predicted value.

Conclusion Springboard and Platform divers at a competitive level are at high risk of SLL disruption. The supporting hand is more at risk than the entry hand. Taping confers a significant reduction in risk of disruption and should be used to prevent injury. Watson's test is a poor clinical test in diagnosis of SLL disruption.

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2 THE INCIDENCE OF UNDIAGNOSED COELIAC DISEASE IN PATIENTS PRESENTING WITH STRESS FRACTURE TO A TERTIARY REFERRAL CENTRE

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Aim Stress fracture aetiology is often multifactorial and laboratory blood tests (LBT) can unmask underlying metabolic bone

risk factors and disorders. Coeliac disease (CD) is associated with low bone mineral density and an increased risk of fractures.¹ In addition, there are rare reports of occult CD presenting with stress fractures.² Anti-tissue transglutaminase antibody (TTG) testing has a high sensitivity and specificity for CD and is used as a screening test.³ This report examines the incidence of undiagnosed CD in patients presenting with stress fractures to a Sport and Exercise Medicine (SEM) clinic. **Methods** A retrospective analysis of 100 consecutive patients with radiologically proven stress fractures presenting to a single tertiary NHS SEM clinic was performed. Age, gender, fracture site, co-morbidities, TTG result and subsequent investigations were examined. Records were reviewed to confirm LBT, including TTG, had been performed at the time of diagnosis.

Results Seventy patients (70%) were female and mean age was 37 years (range 18–69). Metatarsal (35%) and tibial (21%) fractures were most common. TTG was performed in 85 patients. Two patients were excluded due to pre-existing CD. Five patients (5/83 (6%), mean age 38 years (28–57), 80% female) had a positive TTG; three of whom had CD confirmed by endoscopic biopsy and two are awaiting investigation. Four patients with a positive TTG underwent dual energy X-ray absorptiometry, with osteopenia (T-Score between -1.0 and -2.5) found in 75% of cases, although only one had a Z-score less than -2.0.

Conclusion In this cohort, the incidence of undiagnosed CD was between 3.6% to 6%, with a prevalence between 5% to 7%, approximately 5-fold higher than UK population estimates. We recommend that TTG screening should be performed in all patients presenting with stress fractures to identify underlying CD. Further work is required to confirm this association and elucidate potential underlying mechanisms.

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3 PLATELET RICH PLASMA FOR ACUTE ACHILLES TENDON RUPTURE: A DOUBLE-BLIND, MULTICENTRE, RANDOMISED, PLACEBO-CONTROLLED TRIAL

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Aim Slow recovery and disability after Achilles tendon rupture are major challenges. Platelet Rich Plasma (PRP) is an autologous supraphysiological concentration of platelets from whole blood that has demonstrated positive cellular and physiological effects on healing in the laboratory and is widely used in musculoskeletal treatments. However, evidence from adequately powered, robust clinical trials is lacking. We aimed to determine the clinical efficacy of PRP for treatment of acute Achilles tendon rupture.

Methods 230 adults starting Achilles rupture non-surgical management within 12 days of injury were randomised to PRP injection or dry needle insertion to the rupture gap, under local anaesthetic. Participants were blinded to study treatment