INPLASY PROTOCOL

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None declared.

What is the evidence to support the use of extracorporeal shockwave therapies for in-season athletes: a scoping review protocol

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Review question / Objective: **What is the evidence to support the use of extracorporeal shockwave therapies (ESWT) for in-season athletes? Population: athletes and physically active individuals or occupational groups. Intervention: ESWT. Comparator: sham treatment or other treatments. Outcome: pain, functional outcome measures, return to activities or sports.**

Background: **ESWT has been shown to be effective in common athletic injuries including plantar fasciitis, Achilles tendinopathy, medial tibial stress syndrome, and proximal hamstring tendinopathy with a favorable safety profile. Emerging research suggests that ESWT may be an effective treatment to address sports injuries for in-season athletes. With recent work suggesting feasibility to support utilization of EWT in the care of in-season athletes.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 27 April 2023 and was last updated on 27 April 2023 (registration number INPLASY202340102).

INTRODUCTION

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Rationale: Sports injuries can be challenging to treat in-season, with unpredictable healing times following interventions. Surgical management is typically reserved for off-season athletes since recovery commonly requires a significant rehabilitation period of 6-9 months post-operatively. Therefore, it is important to provide an intervention that can provide immediate effect but at the same time have low risks. ESWT may potentially be one such intervention, and therefore, there is a need for scoping review to evaluate what evidence is available.

METHODS

Strategy of data synthesis: We expect small number of studies for each sports-related injury and heterogeneity across the studies that would limit pooling the data. If possible, meta-analyses will be performed to demonstrate the efficacy of ESWT in particular conditions. Otherwise, a narrative synthesis of the available evidence by pathologies and follow-ups will be conducted.

Eligibility criteria: We will include primary research studies that evaluated the efficacy of ESWT for in-season athletes as well as physically active individuals or occupational groups such as military cadets. If the studies contained more than 80% of athletic or physically active patients, these studies will be included. We will include randomized controlled trials, cohort studies, case-control studies, cases series, and case reports and exclude review articles, abstracts, genetic or molecular studies, and animal studies. Any disagreement among authors related to study eligibility will be resolved through discussion.

Source of evidence screening and selection: A librarian designed a search strategy for (ESWT) and athletes prone to injuries. Separate searches were conducted in four databases, PubMed (NLM), Embase (Elsevier), CINAHL complete (EBSCO), and Web of Science (Clarivate) on April 21, 2023 and deduplicated using EndNote (see appendix for full search strategy). Covidence will be used to upload retrieved records from each database and screen eligible studies. Two reviewers will be required to independently screen the studies and any conflict will be resolved through discussion.

Data management: Data extraction will be performed using a template, and two authors will independently extract authors & publication year, country, study design, patient demographics, pathologies, ESWT characteristics, comparators, outcome measures, follow-up duration, main findings, and adverse events.

Language restriction: English.

Country(ies) involved: United States.

Keywords: extracorporeal shockwave therapy; in-season athletes; return to play; scoping review.

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