



Facing the groin pain challenge

An anatomical dictionary facilitating interprofessional collaboration

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INTRODUCTION

Groin pain is a common symptom in professional and amateur athletes. The complex anatomy of the area and the multiple causes resulting in pain in the groin make the diagnosis a real challenge. Till today, many non-anatomic terms such as sports hernia, sportsman's groin, athletic pubalgia or core muscle injury have been used in the literature to describe aetiology behind groin pain, leading to a confusing nomenclature.

PURPOSE OF THE STUDY

- The goal of the present study is to:
- investigate how common is the use of non-anatomic terms in the literature
 - examine to which anatomical structures authors refer when using each term
 - define the right use or reject confusing terms by proposing an anatomy-based approach.

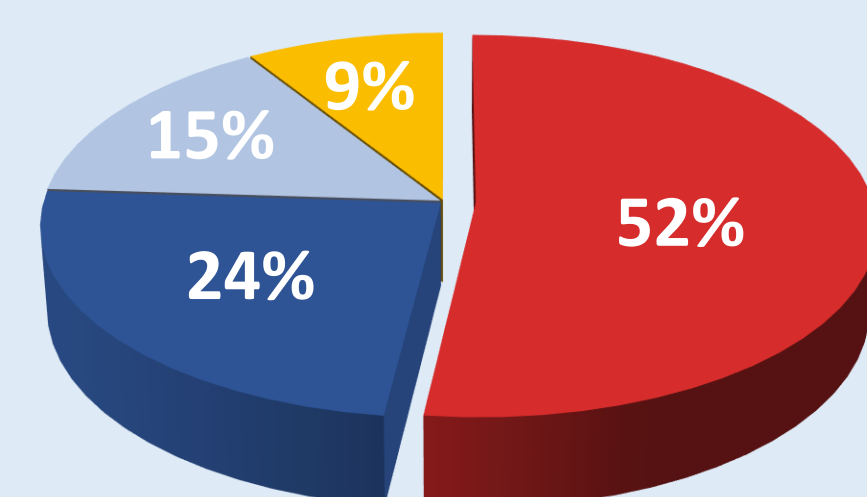
MATERIALS AND METHODS

A systematic review was performed to identify areas of controversy in the literature. Databases searched were PUBMED and MEDLINE. The phrases "Sports Hernia", "Sportsman's Hernia", "Sportsman's Groin", "Gilmore's Groin", "Athletic Pubalgia" and "Core Muscle Injury" were searched in articles' Title/Abstract using advanced research.

RESULTS

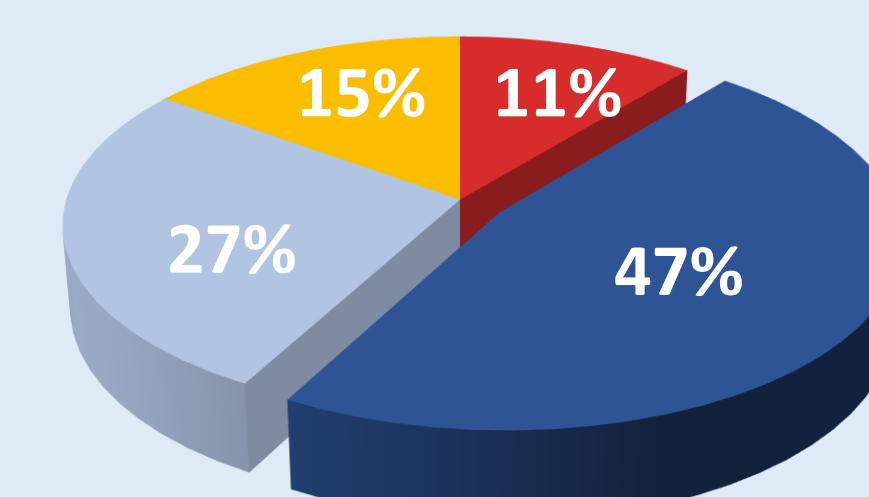
In total, 74 articles were found to include the aforementioned terms. The term "Gilmore's groin" was not identified in any article title or abstract. In the following figure, the use of each term is presented in detail.

How authors use the term **Sports/Sportsman's Hernia**



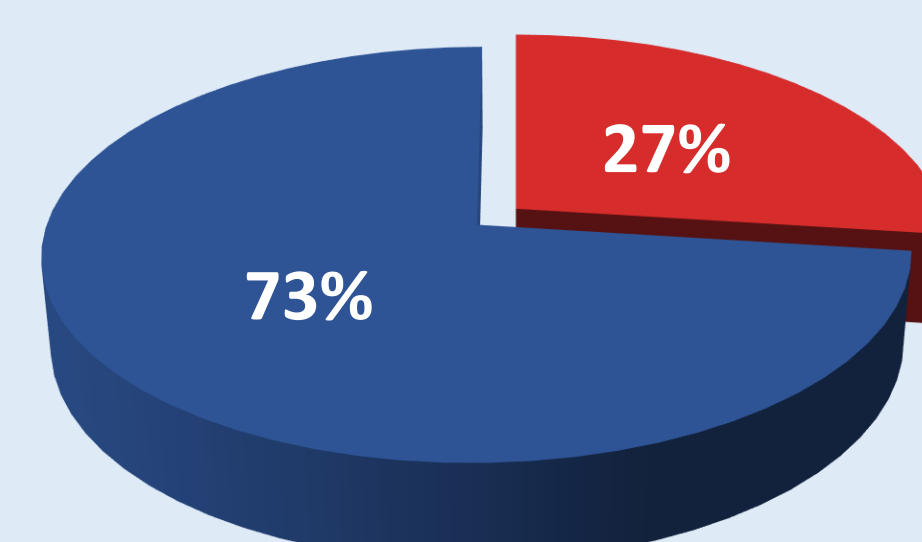
Found in 33 articles

How authors use the term **Athletic Pubalgia**



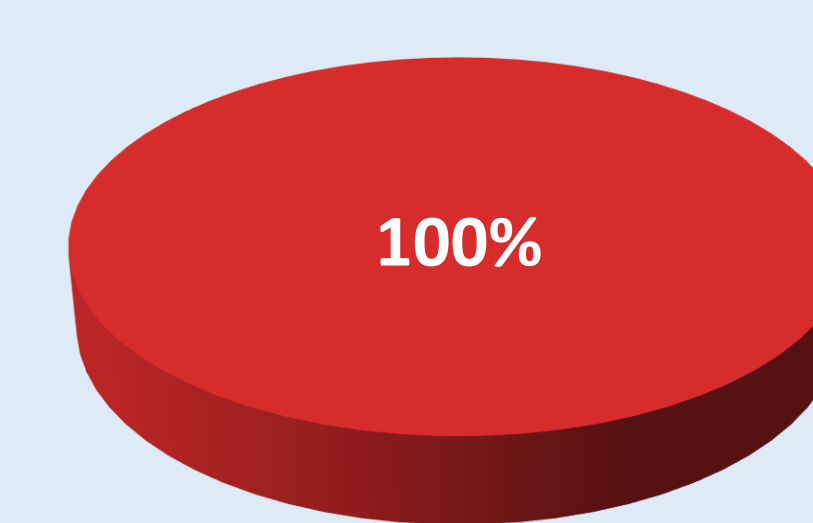
Found in 45 articles

How authors use the term **Core Muscle Injury**



Found in 15 articles

How authors use the term **Sportsman's Groin**



Found in 6 articles

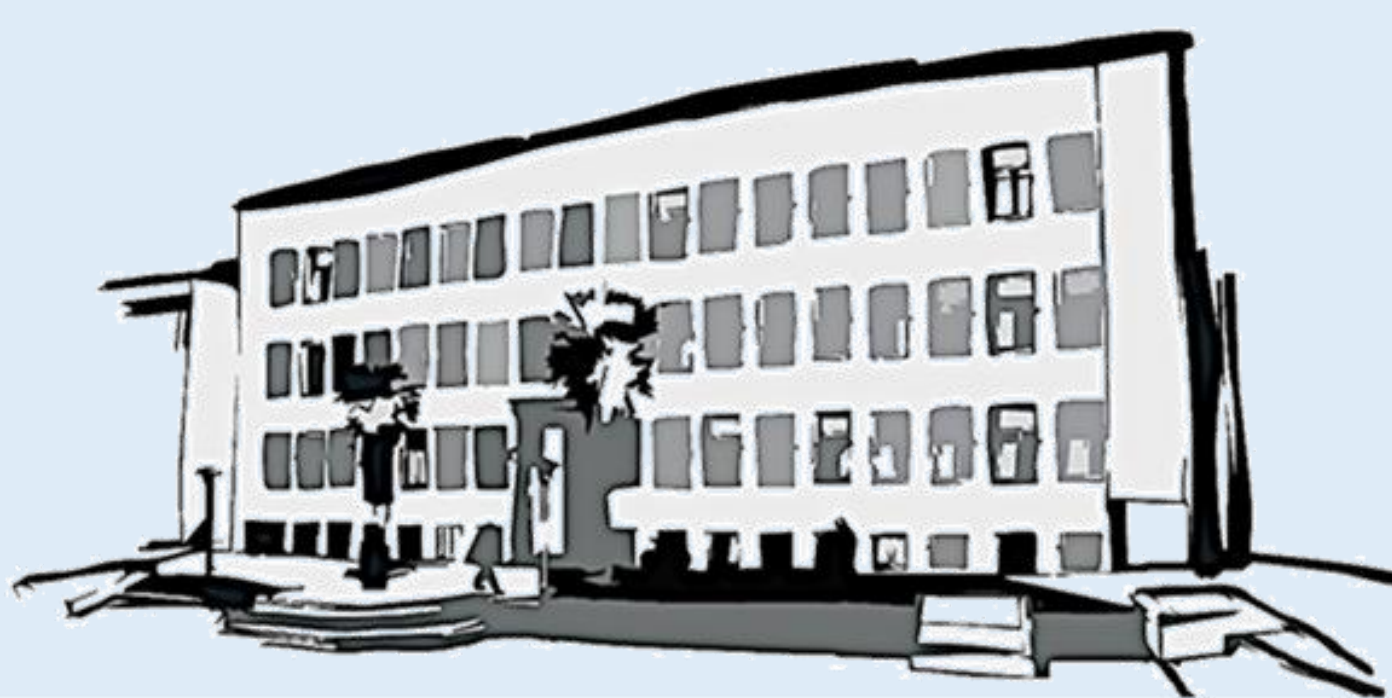
■ Inguinal Disruption
■ Rectus Abdominis/Adductor Longus Pathology
■ Symptom
■ Both

CONCLUSIONS

Anatomy is the key. Diagnosis should be made and named based on pathology observed in specific anatomical structures in accordance with recent consensus statements such as the one produced by the Doha agreement meeting. A clear and consistent anatomic diagnosis will provide the basis for improved communication between healthcare professionals, more high-quality studies and of course evidence-based treatment decisions.

DISCUSSION

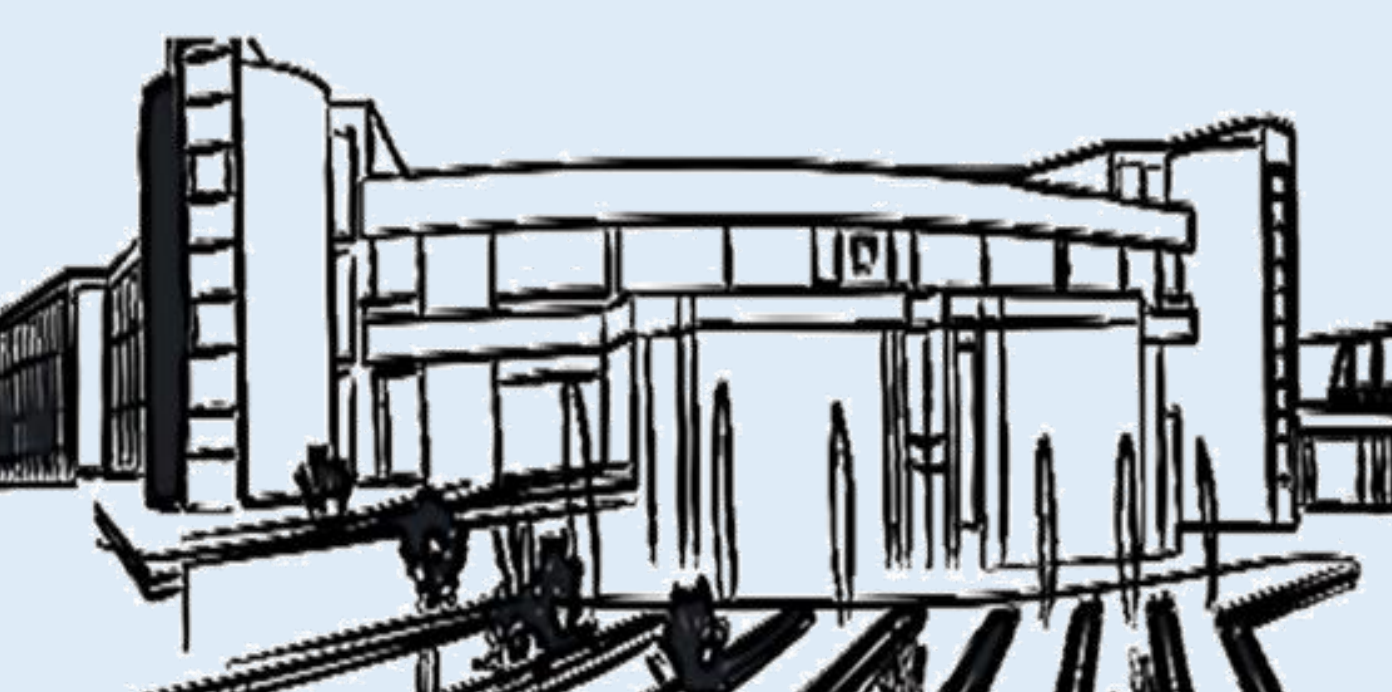
The **primary endpoint** of the present study is that despite the rejection of the search terms by the Manchester consensus and the Doha agreement meeting, the terms are still widely used in the literature. This finding is indicative of the fact that part of the confusion regarding terminology in groin pain is caused by healthcare professionals. The **secondary endpoint** of this study sheds light on the way authors use the searched terms. Sports/sportsman's hernia and athletic pubalgia are the most confusing terms. There is a tendency for the term sports hernia to describe inguinal disruption (52%) and for athletic pubalgia to describe pathology of the rectus abdominis-adductor longus (47%). Similarly, "core muscle injury" is mainly used to describe rectus abdominis-adductor longus pathology (73%), but although less confusing, it is not as clear as "sportsman's groin", which is only used to describe inguinal disruption (100%). We strongly encourage future authors of articles on groin pain to abandon the terms sports hernia, sportsman's hernia, sportsman's groin and athletic pubalgia supporting the Manchester consensus and the Doha agreement meeting. Instead, we encourage the use of the Doha classification along with a specific anatomic diagnosis, when possible. For example, an athlete may be diagnosed with adductor-related groin pain along with the anatomical diagnosis of avulsion of the adductor longus proximal insertion



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The Infographic



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