



Association of Ringside Physicians

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Editor-in-Chief, Editorial Board



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Susan Rees, The Rees Group President and CEO, has over 30 years of association experience. Currently the Executive Director of the American Osteopathic Academy of Sports Medicine, American Society for Veterinary Clinical Pathology, and the Society for Psychophysiological Research, Susan spent 12 years with the Credit Union National Association (CUNA & Affiliates) as the director of their educational publishing division. Susan has an extensive background in association management, marketing and regulatory affairs, as well as print and electronic publishing. She is also an award-winning video producer, having produced educational videos and films for the financial training market. Susan spent two years with Forbes Inc., publisher of Forbes magazine as an international acquisitions editor in the book publishing division. At Forbes, Susan worked with businesses and associations to produce books, manuals, web sites and online learning tools for general retail sales distribution, or distribution through the business or association. Susan holds a Bachelor of Arts Degree in Communications and a Master of Science Degree in Education from the University of Wisconsin-Madison. She has been President and CEO of TRG since 2000.

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From the Editor's Desk

It gives me great pleasure to bring to you the third issue of the *ARP Journal of Combat Sports Medicine*. The first two issues were well received, and I again acknowledge the hard work and dedication of our two Senior Editorial Managers, Lisa Nelson and Susan Rees. They are working tirelessly to improve the Journal and make it a valuable resource for you and your colleagues.

In this issue of the *ARP Journal of Combat Sports Medicine*, Sethi and Wright report on a case of a professional boxer who suffered acute dislocation of the patella during a boxing bout. The presentation and acute management of this relatively uncommon injury in boxing is discussed.

The *ARP Journal of Combat Sports Medicine* is actively soliciting case reports, case series, review articles and original studies related the field of combat sports medicine.

I wish you and your families good health and happiness in 2020.

Sincerely,

Nitin K Sethi, MD, MBBS, FAAN

ACUTE PATELLAR DISLOCATION IN A BOXER DURING A BOUT

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KEY WORDS: patellar dislocation; knee injury; orthopedics; contact sports; boxing

AUTHOR CONTRIBUTIONS: NKS and KEW evaluated the boxer, conceived, drafted, revised, and contributed equally to the manuscript.

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DISCLOSURES: NKS serves as Associate Editor, The Eastern Journal of Medicine. He also serves as the Chief Medical Officer, New York State Athletic Commission (NYSAC). KEW serves as ringside physician for the NYSAC. The views expressed do not necessarily reflect the views of the NYSAC.

Abstract

Patellar dislocations occur at a rate of 5.8 per 100,000 persons, with an increased risk in the younger active population group. It has never been reported in a professional boxer. We report here a case of an acute patellar dislocation occurring during the midst of a professional boxing bout. Traumatic patellar dislocation may present acutely in a combat sports athlete and ringside physicians should be aware of its clinical presentation and management.

Case Report

In a professional boxing bout, a 24-year-old boxer making his professional debut took a step back to avoid a punch, dislocated his left patella and fell to the canvas in obvious distress. The bout was stopped by the referee and ringside physicians immediately entered the ring. The boxer was found to have a left patellar dislocation which was reduced in the ring by extending the left knee and applying a medially directed force on the patellar. The fighter was then assisted out of the ring and taken to the post-fight medical triage room, where his knee was evaluated and immobilized. On questioning he reported sustaining a similar injury to

the same knee a few years ago but was able to return to participating in boxing a few months later. He was administered a medical suspension and an orthopedic clearance was requested prior to return to competitive boxing.

Discussion

Patellar dislocations occur at a rate of 5.8 per 100,000 persons, with an increased risk in the younger age group, in females, and during sports participation in athletes.^{3,4} It has though never been reported in a professional boxer. In combat sports, the axial load mechanism of injury is common. Excessive vertical compression can cause injury to the vertebral column. Injury also occurs to the head and neck due to abrupt deceleration of the head and continued forward torso momentum before simultaneous rebound of both the head and torso. Injuries involving the upper limbs such as shoulder dislocation, rotator cuff tear, metacarpal fractures and distal biceps tendon rupture are more commonly encountered. The lower limb injuries that are more frequently reported include tears of the ligaments and menisci of the knee and ankle sprains.

Most patellar dislocations occur with the knee in slight flexion, with the tibia externally rotated.⁵ A distinction should be made between acute traumatic patellar dislocation and recurrent instability and dislocations of the patella. Various factors may predispose an athlete to the latter. These include vastus medialis muscle hypoplasia, incompetent medial patellofemoral ligament, increased femoral anteversion with compensatory external tibial torsion, trochlear dysplasia, patella alta, dysplastic patella, and laterally positioned tibial tuberosity, femorotibial malrotation and genu valgum.^{1,6,7}

An acute patellar dislocation should be reduced by extending the left knee and applying a medially directed force on the patellar. This can be done in the ring or the cage by a qualified physician, preferably an orthopedic physician if available. If reduction cannot be achieved in the ring or cage due to patient discomfort and associated muscular spasm, the injured combat sports athlete should be

transported out of the arena with the knee in extension and supported by splints to an acute care facility where reduction can usually be achieved under sedation.

A complete radiographic evaluation of the knee is recommended in these athletes including X-rays, MRI and CT scans to evaluate the anatomy of the osseous structures and soft tissues. These studies may reveal an associated hemarthrosis, medial patellofemoral ligament injury, medial retinacular disruption, osteochondral injuries of the medial patellar facet or the lateral trochlear ridge as well as supply information about the anatomy of the femoral trochlea and the position of the tibial tubercle. Evaluation by an orthopedic surgeon is essential in order to identify and manage the above associated injuries, to decrease the risk of recurrent dislocation and to restore function to the knee. Redislocation rates quoted in the medical literature vary and, it is still debated whether initial stabilizing surgery for treatment of a primary traumatic patellar dislocation decreases the risk of further instability.^{1,2} In professional combat sport athletes, where the patella is subjected to greater strain during the course of training and fighting, thoughtful medical decision making has to be exercised about conservative management (immobilization for 3-4 weeks followed by physical therapy) versus surgical stabilization. More than one anatomical factor was present in 35 of 60 patients (58.3%) with recurrent dislocations.⁶ Surgery should address the any abnormal anatomic factors and impart stability to the patella. Surgery could take the form of a medial patellofemoral ligament reconstruction, sulcus-seeping trochleoplasty, or tibial tubercle osteotomy. With appropriate treatment the majority of patient will have good outcomes.

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The conflict between combat sports and ethical medicine: Can the two co- exist?

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DISCLOSURES: NKS serves as Associate Editor, *The Eastern Journal of Medicine*. He also serves as Chief Medical Officer of the New York State Athletic Commission (NYSAC). The views expressed are his and do not necessarily reflect the views of the NYSAC.

Every so often, my love and passion for combat sports collides head-on with my love and passion for medicine and protecting the combat sports athlete's health. One would assume that these two passions of mine would not cause any conflict in me and for a while they never did. Many weekends find me at Mendez Boxing hitting the heavy bag while wearing my favorite T-shirt proudly emblazoned, "Neurologist-because awesome is not a job description". My friends at Mendez, boxers both amateur and professional and trainers simply call me, "doc" and I have spent many memorable moments in their company engaging in passionate discussions about combat sports.

I was once invited to present at Grand Rounds in my own institution. The audience consisted of my colleagues in the Department of Neurology and Neurosurgery, resident physicians in training, and medical students rotating in neurology. The topic I chose was, "Acute and Chronic Neurological Injuries in Boxing". I spoke passionately about the topic and it was clear this was something close to my heart. To my dismay, many of my colleagues disagreed with my involvement in combat sports and left midway through my talk. "How could I, as a neurologist, support boxing?", they asked me later. I felt hurt but my passion and love for both combat sports and neurology remained unchanged.

Recent events though have forced me to come to terms with my involvement in combat sports as a ringside physician. In the second half of 2019, three boxers suffered severe traumatic brain injury and died in quick succession. After each tragedy it was debated whether the fight should have been stopped early either by the referee or ringside physician. In some states such as New York, either the referee or ringside physician is authorized to stop the fight, while in other states the referee is the sole arbitrator of a bout. When I find myself forced to make a decision whether a bout should be stopped on medical grounds or allowed to continue, a principle which has always guided me is that I am present ringside or cage side for only one purpose: to stop a fight once I feel the threshold has been reached beyond which I cannot guarantee a fighter's health and safety. The fighters are professionals who are skilled and trained to do their job, which is to fight. These elite athletes command our greatest respect. As physicians we too are professionals, skilled and trained to do our job which is to protect the athletes' health. The fighter and his corner may want the fight to continue even at the expense of a fighter's health. As physicians, we cannot allow that. "Do no harm" is the oath we take as physicians and allowing an injured fighter to continue goes against that oath. I realize that my threshold of stopping a fight may differ from a

fighter's or a fan's or even a referee's threshold of stopping a fight. The doctor's threshold of stopping a fight should be the lowest. "When in doubt about fighter's health and safety stop the fight", should be the guiding tenant of a ringside physician. As physicians, and especially for me as a physician neurologist, we cannot defend combat sports by saying that boxing or MMA is good for the brain or the body. No amount of boxing or MMA is good for the brain; not one round, not one punch to the head. Ringside or cage-side physicians need to remain objective, completely free of any bias, and make a call to stop a fight based solely on the medical facts in front of them and not the fighter's past fight record, how big the fight is, or how much money is at stake. The minute we do that, we fail to remain objective; instead, we turn into spectators who are sitting ringside or cage side rather than in the stands. Our judgment and medical decision-making are going to be biased and now we are primed to fail in our only duty, which is to protect the athlete's health.

Do I have all the answers? No, but sometimes under tremendous pressure ringside physicians must make a call. It does not matter whether the setting is the emergency department (ED), the intensive care unit (ICU), or the bright lights of a combat sports arena. We should not treat a patient seen in the ED after an assault on the street differently from an athlete who has sustained similar injuries inside a ring or a cage. If we have concerns about this assault victim, we are not going to tell him all is well and just discharge home from the ED; rather, we admit him and do the necessary medical evaluation and management. Why should our medical decision-making approach be different cage side or ringside just because it is a big fight? If it is, we have no right to be there, for we are failing our patient (the athlete) who has trusted us with his/her health upon entering the cage or the ring.

The ringside/cage-side setting is far more challenging in which to practice medicine than the controlled environment of the ED or hospital. Here we have to make a call and we must make it fast. We do not have the luxury of doing labs or a CT scan. It is all clinical with only the athlete in front of us. It takes years of medical training and experience to determine which athlete has only suffered a mild concussion and can be discharged home versus one who may be about to develop a far more serious traumatic brain injury. The call has to be right since seldom there is a second chance to re-approach the patient (athlete) and reconsider the medical decision making exercised. It is not only unfortunate but also dangerous when an experienced referee or ringside physician is afraid to make a call because he/she is worried how the decision will be viewed by the public and other parties. When the arbitrators of the fight are worried whether their decision is going to cost them the opportunity of working the next "big" fight, they cannot be entrusted with the job of protecting the fighter's health and safety.

It is understandable why even my own peers in neurology and medicine do not support the work of ringside physicians and call for a ban on all combat sports.^{1,2} Combat sports and ethical medicine cannot co-exist without conflict, but it is a responsibility that we cannot choose to ignore. We owe it to the athletes and their families. The gap must be bridged and combat sports must be made safer.

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Information and Submission Instructions for Authors

General and Formatting Guidelines:

All manuscripts must be written in English, using UK or American English spellings. All materials must be submitted electronically to Nitin Sethi, Editor-in-Chief, at sethinitinmd@hotmail.com.

Submissions must:

- Be submitted in Microsoft Word format (.doc or .docx);
- Be double-spaced with 1" margins;
- Be typed in a commonly-used font (Times Roman, Helvetica, Arial, or similar), no smaller than 11 points.
- Include page numbers

Abbreviations and Acronyms

The use of abbreviations and acronyms, except for those that are quite common in combat sports medicine is strongly discouraged. Authors should be careful to ensure that idiosyncratic acronyms are not included in the submitted version, as this will improve readability for the editors and the reviewers. In addition, authors will be asked to remove idiosyncratic acronyms in any accepted materials.

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References should be listed in the order in which they appear in the article and should be formatted using the *AMA Manual of Style*.

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Electronic Journal Article

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Aggleton JP. Understanding anterograde amnesia: disconnections and hidden lesions. *Q J Exp Psychol*. 2008;61(10):1441-1471. <http://search.ebscohost.com/login.aspx?direct=true&db=pbh&AN=34168185&site=ehost-live> Accessed March 18, 2010.

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Entire Book

Rantucci MJ. *Pharmacists Talking With Patients: A Guide to Patient Counseling*. 2nd ed. Philadelphia, PA: Lippincott Williams & Wilkins; 2007.

Book Chapter

Solensky R. Drug allergy: desensitization and treatment of reactions to antibiotics and aspirin. In: Lockey P, ed. *Allergens and Allergen Immunotherapy*. 3rd ed. New York, NY: Marcel Dekker; 2004:585-606.

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Canadian Press. Generic drugs to be bought in bulk by provinces. CBC News. <http://www.cbc.ca/news/canada/saskatchewan/story/2013/01/18/drug-costs-provinces.html>. Published January 18, 2013. Updated January 18, 2013. Accessed February 4, 2013.

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Basic science and research articles should include the following subcategories, clearly labeled in the manuscript:

1. Abstract of no more than 300 words in length, which summarizes the main points of the article. Please include 3-5 keywords that facilitate search engine optimization (SEO) and that are consistent with the title, headers, and abstract.
2. Introduction
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