



Polo & Equestrian Injuries to the Upper Limbs

DOCTOR ALEJANDRO BADIA IS ONE OF THE LEADING EXPERTS IN HIS FIELD AND HE HAS DEALT WITH A NUMBER OF SERIOUS INJURIES TO BARBADOS POLO AND OTHER SPORTS PEOPLE. HIS DETAILED ANALYSIS OF THE POTENTIAL INJURIES AND THEIR TREATMENT PROVIDES A DEEP INSIGHT INTO THE DANGERS OF SPORT, BUT OF MORE IMPORTANCE, THE MEDICAL SOLUTIONS.

POLO BARBADOS

While competitive and recreational polo rely significantly upon core and lower extremity strength and endurance, it is actually the upper extremity, which is usually involved in traumatic, or overuse injuries. This is due to the simple fact that the legs are constrained in the stirrups, and the participant has to use the upper limb to cushion a fall and hopefully roll. Besides injuries from a fall or collision, there are a wide variety of both traumatic and atraumatic injuries involving the hand, wrist, elbow and shoulder region due to the demanding use of the mallet. Fortunately, most of these injuries will not prevent the athlete from returning to their sport. Studies on incidence of polo injuries indicate that 40% involve the upper limb with facial lacerations being the second most common category of injury. It is, of course, head and cervical spine injuries that are the true danger. Fortunately, the majority of these can be prevented by the simple use of a helmet and a face protector. However, protective gear is not practical for the upper limb since hand, wrist and elbow mobility is critical to performing the complex functions of riding and wielding the polo mallet.



THE CLASSIC FRACTURE DISCUSSED AMONGST HORSE RIDERS AND POLO ATHLETES IS THAT OF THE COLLARBONE, OR CLAVICLE.



Traumatic injuries are most common. However, there are certain chronic injuries or conditions that can develop with the prolonged awkward position required during riding. Gripping the reins and mallet can aggravate tendinitis usually involving the flexor tendons. Carpal tunnel syndrome, which is a compression neuropathy of the median nerve at the wrist, can be exacerbated by the functions required of various equestrian related sports including polo. This requires evaluation by a hand surgeon or a neurologist and simple nerve conduction studies will establish the diagnosis. The definitive treatment is, despite popular opinion, quite simple. This involves release of the transverse carpal ligament, which is a 5-minute outpatient surgical procedure under local anesthesia that is often done endoscopically. It is an unfortunate myth that the public has been led to believe that this is due to typing or computer use. Other chronic conditions such as lateral epicondylitis (tennis elbow) as well as shoulder bursitis can often be aggravated and conservative treatment usually

suffices. While tennis and golf are traditionally associated to these chronic tendinopathies, gripping the reins for hours can exacerbate the rider predisposed to this common condition. Failure of conservative treatment via ice, stretching or rehab is now an indication for the FAST procedure, a minimally invasive solution involving high energy ultrasound to eliminate the non-healing tendinous tissue, allowing competitors to get back to riding within 1-2 weeks. Osteoarthritis, particularly at the base of the thumb, as is common in middle-aged women, is aggravated by hand positioning during riding. The key for these chronic injuries is to be evaluated by a hand and upper extremity specialist because these diagnoses are often less clear-cut.

The upper limb fractures are obviously less subtle in their diagnosis. The classic fracture discussed amongst horse riders and polo athletes is that of the collarbone, or clavicle. This occurs when the rider is thrown and the resultant force on the arm and shoulder girdle leads to a break in this bone. Fortunately, most clavicle fractures are treated conservatively with a sling or in youngsters, a figure-eight-type brace, but it has become increasingly common to perform operative reduction of these fractures in order to achieve the best result. Lance Armstrong has brought this fracture to public eye when he returned to competitive cycling only 3 weeks after plate/screw stabilization of this common injury also ubiquitous in cycling.

Much more frequent than the commonly seen collarbone fracture are fractures about the wrist. The most common would be a fracture of the distal radius, which is the spongy bone portion of the forearm where it meets the hand, and is far-and-away the most common fracture seen in the adult population in general. Treatment of these fractures has been revolutionized by a new method of fixation that was developed by my previous colleagues and I over 10 years ago. This involves an anatomic correction of the displaced bone and placement of a titanium plate and screws on the palmar aspect of the wrist that fixate the bone in the anatomic position. This





allows for rapid recovery of function with essentially no long-term deficit. Riders can return to their sport within several months after this injury using this new technique. However, the most classic polo injury about the wrist is the dreaded scaphoid fracture that is now managed with a compression screw to allow early motion and avoid stiffness and atrophy from prolonged casting. Until recently, there was a high incidence of scaphoid

nonunions where the fracture never heals and leads to chronic issues in the wrist that needs more aggressive reconstruction. The current protocol of offering early percutaneous (tiny incision) screw fixation has minimized these complications and is preferable for the athlete who wants to get back in the saddle sooner. More subtle injuries to the wrist include ligament tears between the small carpal bones, which require an astute examination by a wrist specialist in order to establish a diagnosis. This is the most common cause of chronic wrist pain and is an entity that requires careful attention. The clinician should be experienced in wrist arthroscopy since this is the only sure way to establish the diagnosis, and can offer minimally invasive treatment. The smaller bones in the hand can also be involved in trauma from a fall or an ill placed swing of the mallet, including phalangeal and metacarpal fractures, but these tend to be less common.

Fortunately, major fractures occur only during high-speed falls or in older riders who may have osteoporosis. Complex fractures about the elbow can occur and there is a great variation in the fracture patterns. It is important that an upper extremity specialist evaluate these injuries, as recovery of full elbow range of motion is often difficult. Fractures of the upper arm (humerus) may also result from a fall and can even extend into the shoulder joint.

The key point is to seek evaluation by a dedicated upper extremity specialist. This implies that the rider be appropriately immobilized during the visit to the emergency room but then should seek the appropriate specialist on a less-emergent basis. The general orthopedic surgeon often addresses simple fractures, but the highly competitive polo competitor or horseman truly needs an optimal result in order to maximize their return to full function.

Given timely and precise treatment, there is no reason why a polo athlete or any equestrian sportsman should not be able to return to riding no matter what the level of injury to the upper limb.

Leading Hand and Upper Extremity Surgeon Doctor Alejandro Badia, MD, FACS is based at:

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TESTIMONIALS

"Dr. Badia is great. With polo and show jumping being the sports of choice we keep Dr. Badia on speed dial. He has a state of the art facility and is always accommodating and his team help with all aspects, which is great when having surgery away from home. He has operated on my thumb to reattach a ligament I had detached from the bone. You don't appreciate how important your thumb is until you don't have it!! I made a great recovery and have the full use of it again. He has a fantastic anesthesiologist, excellent nurses and a great physio- operation to help with rehab. His colleague, Dr. Herrera also operated on my knee to repair a meniscus tear. He has also repaired my husband Wayne's shoulder - a torn rotator cuff, and my sister Angelique's arm which was broken twice - the first time very seriously."

Monique Archer
Barbados polo player and Show jumper

"I fell in the Cheshire game three years ago, and fractured and dislocated my right wrist. It was my first major injury, but what an injury it was. Apart from the excruciating pain, because of the damage to the wrist joint, I feared I would never play polo again and have trouble and pain in everyday life. The first surgery I had was on island, but I was still in a lot of pain 8 weeks after. One day while in Bjorn's Bjerkamn's office he suggested I contact Dr. Badia. I went up to Miami the next week and Dr. Badia showed me exactly where I was getting the pain, and arranged surgery for the following week. It was the start of June, but amazingly I was playing polo by Christmas. I'm very happy with the results I got from Dr. Badia and would recommend his services to everyone."

Danny Atwell
Barbados National Polo player

"I was experiencing a lot of pain in my shoulder in 2011. As a competitive squash player I continued playing but the pain got worse. After examination an MRI scan showed a torn tendon. At first I was reluctant consider surgery, but after talking to Dr. Badia he put my mind at rest and I decided to go ahead with it in October 2011. The care I received at the Badia Hand and Shoulder Centre was fantastic. I met with Dr. Badia the day before the surgery and he explained everything in detail. The staff were excellent, very helpful and the Badia Hand to Shoulder Center is an amazing facility. Dr. Badia successfully repaired the torn tendon. By February 2012 I was back on the squash court and not only achieved my goal of playing in the World Masters in July, but I finished in fourth place! One thing I have to mention is the excellent after care I received from Dr. Badia. Since I do not live in the US I emailed him with any queries or concerns and he always emailed me back on the same day. Quite remarkable knowing how busy he is!"

Karen Meakins
Multiple Barbados National Squash Champion

"I'm not sure where and when I developed Carpal Tunnel Syndrome in both my wrists, but it was slowly bringing my sports career to an end and making golf and everyday life painful. After the ailment had been diagnosed I made contact with the Badia Hand and Shoulder Center and from then on everything was very professionally administered. Doctor Badia and his staff were extremely helpful and the operations on both my wrists were performed endoscopically at the same time under a local anesthetic. I was able to start using my wrists within 24 hours and play light golf within three weeks. He's an exceptional surgeon working with a very efficient and friendly team."

Clarence Hiles
Local golfer and former cricket, rugby and hockey player.



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