GRSM Grand River Sports Medicine Centre
INJURY INFO

A TALE OF TWO SHOULDERS

by: DR. TREVOR L. HALL, MD, CCFP, DIP. SPORT MED

Last year, Boston Red Sox fans cheered the return of Pedro Martinez who had been sidelined because of an "inflamed shoulder". Meanwhile, Toronto Blue Jays fans are still cringing about pitcher Mike Sirotka's missed season due to his shoulder problem that required surgery.

So why was Pedro able to play but Mike wasn't? How are their injuries similar to that of thousands of Canadian recreational baseball players? And how can your home renovations give you that same "inflamed shoulder" feeling that Pedro felt?

Let's start with some basics. Pedro Martinez's injury involved inflammation of the rotator cuff. This injury is usually referred to as rotator cuff tendonitis, but is also known as rotator cuff bursitis, tendonapathy or impingement syndrome.

The rotator cuff is a group of four small muscles and tendons that surround and stabilize the shoulder joint. The shoulder is a "ball and socket" joint with a very shallow socket (like a golf ball on a tee). This design permits a large range of motion at the shoulder, making it possible to throw a ball. However, excessive movement comes at a price. A shallow socket makes the joint inherently unstable .

Mike Sirotka's injury involved a tear of the "labrum". The labrum is the rubbery cartilage that surrounds and deepens the socket of the shoulder joint. Having a labral tear of the shoulder is similar to having a "cartilage tear" of the knee.

Why has Pedro Martinez had recurrent problems with his shoulder? Pitching a ball at 98 mph places tremendous stress on the shoulder. At a slight 5'11"and 170 lbs., Pedro's shoulder must experience a lot of stress to generate such velocities.

In addition, biomechanical factors that contribute to recurrent rotator cuff problems include muscle imbalances, tightness of the rotator cuff and improper tracking of the shoulder blade. Pitching technique is also very important. Poor technique such as "opening up" too soon, inadequate wind-up (not using legs and trunk to generate speed), and poor follow-through can place extra strain on the rotator cuff. Also, bony abnormalities of the shoulder can cause the rotator cuff to be compressed or "impinged" against the bone above it, which causes more inflammation and pain.

Rotator cuff tendonitis is very common. Most of the injured baseball players that I see in my sports medicine practice have some of the factors mentioned above, that predispose them to rotator cuff problems. This injury occurs in the young and the old, and in both recreational and professional athletes. Labral tears, on the other hand, are much less common. The chronic repetitive stress of pitching contributes to both injuries, but a sudden traumatic strain on the shoulder can also be a trigger.

Both of these injuries will usually cause pain when throwing a ball. Overhead movements, such as painting and home renovations, aggravate both injuries since the overhead shoulder position causes the rotator cuff or torn labrum to become impinged or compressed. Sleeping with the arm above the head can also be problematic. Labral tears can sometimes cause a clicking or catching sensation.

Rotator cuff tendonitis can usually be successfully treated by correcting the biomechanical factors mentioned above. A sports physiotherapist may be very helpful in accomplishing these corrections. A new technique called active release therapy (ART) has been proven clinically useful in treating shoulder joint tightness.

I have found video and computer analysis to be very useful in detecting and correcting pitching technique problems. Occasionally, anti-inflammatory medication and/or cortisone injections are needed to settle down the inflammation. Monitoring pitch counts and innings pitched is also important, as well as applying ice to the shoulder after games. Pain that lasts for more that a few days should be assessed by a physician.

So an "inflamed shoulder" like Pedro's should improve with proper treatment and a graduated return to pitching. Only rarely would a shoulder tendonitis require surgery. A labral tear, on the other hand, usually does not heal unless surgery is performed to correct the tear. Therefore, once Mike Sirotka's labral tear was detected by a special test called magnetic resonance imaging (MRI), he was scheduled for surgery. And so, unfortunately, his season was over.

Dr. Trevor L. Hall, MD, CCFP, Dip. Sport Med., is a sports medicine physician, certified by the Canadian Academy of SportMedicine and fellowship-trained at the University of Toronto. He is an assistant clinical professor at the McMaster University Medical School and a guest lecturer at the University of Waterloo. He has worked internationally with Canadian national teams and currently is sports medicine consultant for WLU Football Team.