Mononucleosis and Hockey Athletes

Infectious mononucleosis (IM) affects thousands of athletes every year. It is especially common in the 18-24 year old population which touches all of our locker rooms and for some of us our entire rosters. This is a brief review of the current best practices for recognition, diagnosis, care, and return to play of IM.

Recognition
The most common clinic findings that should prompt further exploration are a combination of fever, sore throat, and potentially tender posterior cervical lymph nodes. Tenderness in the upper left abdominal quadrant may also be present depending on how long the infection has been lingering. Reports of general fatigue, headaches, and even skin rash on the trunk and upper body are also common.

Diagnosis
While no single test can for certain identify a case of IM a blood test looking for developing antibodies as well as CBC lab are commonly performed. IM will likely show an increased lymphocyte count and presence of atypical white blood cells. However the heterophile antibodies test may not be positive for some time after the initial infection. For this reason an IM diagnosis is still largely a clinical diagnosis. With the combined symptoms of fever, sore throat, tender cervical lymph nodes, and elevated lymphocyte count one can make the reasonable diagnosis and begin care accordingly. Many patients will show abdominal pain however physical exam with palpation and percussion have been shown to be only partially reliable in diagnosis. In athletes who regularly have well developed abdominal musculature this becomes even more difficult. Imaging of the spleen is often done however research has shown that without individual healthy baselines using a one-time image alone is not reliable for diagnosis due to the varying sizes of spleen across the population.

Care
Treatment usually includes rest until fever and symptoms resolve. Maintaining hydration levels are equally important. Acetaminophen for comfort is regularly used. Anti-viral meds and corticosteroids may help with initial symptoms briefly especially in the finding of streptococcal pharyngitis but have not been shown to reduce the return to play timeline. Transmission of the virus is generally quite low so isolation is not needed. Avoiding aspirin and alcohol should also be recommended.

Return to Play
Most athletes will self-limit themselves for a week or two due to symptoms. It is generally thought a minimum of 3 weeks is needed before returning to activity. There is some current research showing a return to light cardio activity as soon as they are without fever to be tolerated without negative effects. Returning to contact is a bit more disputed with some aggressively pushing that around the 3 week mark when the risk of spleen damage is decreased. This should be done on an individual basis with careful correlation of all clinical symptoms and with proper communication to the athlete about the risks involved.

Complications
Returning an athlete too early can result in delayed full recovery and a decrease in performance. There is some thought that extreme cases can take up to a year to return to full energy and performance levels. An enlarged spleen or splenomegaly is usually the most concerning risk due to the chance of injury to the organ. MRI and CT will give great detailed pictures of the spleen and are best used for suspected lacerations or ruptures. Their use in evaluating spleen size is limited due to lack of baselines. Use of ultrasound is controversial for many of the same reasons however ultrasound does provide much easier logistics for repeat exams due to its in-office availability and reduced radiation exposure compared to MRI or CT. Repeat or serial imaging can be useful for determining return to play as an enlarged spleen begins to heal and reduce back to normal size.

Ruptures and lacerations in the literature are reported to only be a .1-.5% risk however in our setting of contact sports this risk is inherently higher. There are numerous reports and case studies of spleen injury in hockey. Some of those are from too aggressive of a return after a diagnosis of IM. However there are also plenty of reports of spleen injuries reported where the IM was not previously diagnosed either by lack of symptoms or a misdiagnosis.

These rare cases of spleen injury usually present following direct trauma to the upper left quadrant of the abdomen. It is usually accompanied with severe pain in the abdomen. Prompt recognition of these signs as well as immediate follow-up care including proper imaging is critical. This is often an emergency surgical situation due to bleeding into the abdominal cavity.