

## **Exercise and the Athlete with Infectious Mononucleosis.**

Roy J. Shephard. *Clinical Journal of Sports Medicine*, Vol 27, No. 2, March 2017.

Infectious mononucleosis (IM) is not uncommonly encountered, and the general risk of splenic rupture is well known. More specific considerations, such as clinical certainty regarding the presence of splenomegaly and treatment recommendations, specifically in the active population, may be less clear or generally less well known in the family medicine setting.

This recent general review assessed the evidence regarding the appropriate management of IM in the setting of an active individual, as well as the risks of exercise. It also reviewed issues with diagnosis and disease status, and progression to chronic fatigue syndrome (CFS).

Included in the review were 34 articles, broadly categorized as 1) the nature of IM and possible progression to CFS, 2) spontaneous splenic rupture, 3) determining splenic size, and 4) management recommendations for the athlete with IM.

The following is a brief review of some of the author's important conclusions:

- Must consider IM in setting of fever, lymphadenopathy, sore throat, and fatigue, especially in an adolescent or young adult athlete.
- Labs: lymphocytosis with >10% atypical lymphocytes and positive heterophile IgM antibody test. More sensitive (especially in the early phase of infection) is Epstein-Barr nuclear antigen and IgG and IgM viral capsid antigens (VCA), but this is much more expensive. Note: can get false positive from past infections (addressed by determining avidity of VCA IgG – beyond scope of this review). Less reliable markers include abnormal LFTs, especially ALP, and elevated proinflammatory cytokines.
- Clinical exam with palpation and percussion are not effective ways to detect splenomegaly. Furthermore, palpating an infected spleen over-vigorously has the potential to cause rupture.
- Ultrasound will usually show splenomegaly within the first few weeks of infection (peaking around day 12), but the size may remain within the broadly categorized normal limits, and may be more useful for monitoring purposes (i.e. to avoid missing pathological enlargement of a small spleen). Use the same modality/methodology for serial measurements.
- Main risks:
  - Splenic rupture. Usually occurs during first 3-4 weeks of infection. After this, risks of contact trauma, a Valsalva, or spontaneous rupture felt to be sufficiently low to allow graded return to play (though some advocate for 2 months, due to at least one case report of rupture at 7 weeks).
    - Sudden onset abdominal pain (or referred shoulder/scapula pain secondary to intraperitoneal blood irritating the diaphragm) – suspect ruptured spleen.
  - 5% may develop serious complications: neurological, respiratory obstruction, myocarditis, liver failure.
  - A small proportion of cases of IM will progress to CFS. Relationship of IM and CFS inconsistent. Excessive physical activity may worsen this, but more study is needed.
- Management overall:
  - Largely supportive and symptomatic, with no evidence of benefit from routine corticosteroids or antivirals; (corticosteroids may be considered for severe edematous airway obstruction; antivirals may help some with long-term fatigue).

- As above, return to light noncontact activity after 3-4 weeks of rest in asymptomatic athlete, with normal ultrasound (understanding its limitations and wide range of normal) is reasonable with little risk to long term health. Note that highly trained athletes may take 3 months to return to their performance level.

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