Medial Tibial Stress Syndrome

Medial tibial stress syndrome (MTSS), also known as shin splints, is an overuse injury that results in periosteal inflammation. Patients may experience diffuse tibial pain. The diagnosis is mainly clinical, and conservative therapy is usually appropriate.

PLAY PICMONIC

Pathophysiology

Overuse Injury

Overtime Injury

Medial tibial stress injury is an overuse injury of the shin area. This disease is usually seen in runners, military recruits, and jumping athletes. While working to improve in their sport, they may overload or over-challenge themselves. Additionally, running repeatedly on hard surfaces like cement or uneven surfaces is a risk factor. Even wearing improper running shoes can lead to the repetitive-stress injury.

Periosteal Inflammation

Pear-stem In-flames

The periosteum is connective tissue that surrounds bones. When overuse occurs, the periosteum around the medial tibia becomes inflamed, and medial tibial stress syndrome develops.

Clinical Findings

Diffuse Tibial Pain

D-fuse Tibetan with Pain-bolts

The pain in medial tibial stress syndrome is mostly mostly localized to the middle and distal tibia. There is tenderness of surrounding muscles.

Diagnosis

Diagnosis by Clinical Impression

Diagnostic-computer displaying Clinical Impression

Patients are diagnosed by history and physical. In the history, patients complain of diffuse pain during exercise in their inner leg by the medial tibial border. The pain is exacerbated by activity. The pain can also lasts hours or days after the activity ends. On the physical exam, there is tenderness along the medial tibia border.

Treatment

Conservative Therapy

Conservative-Reagan

Treatment is conservative and typically includes patient education about how to modify exercise activity and proper shoe fitting to prevent medial tibial stress syndrome. Examples include running on synthetic material instead of cement or decreasing running training distance.