Opinion Article

Diagnosis and Therapeutic Considerations of Relapsing Synovitis

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ABOUT THE STUDY

Relapsing synovitis, also known as transient synovitis or toxic synovitis, is a common condition primarily affecting children. It is characterized by the inflammation of the synovial membrane lining the joint, resulting in pain, swelling, and limited joint mobility. Although it is usually self-limiting and resolves on its own, the diagnosis can be challenging due to the similarity of symptoms with more serious joint conditions.

Diagnosis

Clinical presentation: Relapsing synovitis typically affects children between the ages of 3 and 8 years, with boys being more commonly affected than girls. The classic presentation includes the sudden onset of hip or knee pain, often accompanied by limping or reluctance to bear weight on the affected limb. The pain may be localized or radiate to the thigh or leg. The joint may become swollen, warm to touch, and tender. The child may also exhibit low-grade fever and irritability. The symptoms often appear suddenly, and they may reach their peak within 24-48 hours. The hallmark of relapsing synovitis is its transient nature, with symptoms typically resolving within 1-4 weeks.

Differential diagnosis: Given the overlapping symptoms with other joint disorders, it is crucial to consider a wide range of differential diagnoses to rule out more serious conditions. Some of the conditions that should be considered include:

Septic arthritis: An infection of the joint, usually caused by bacteria, which requires prompt medical intervention to prevent joint damage and systemic complications.

Perthes disease: Avascular necrosis of the hip joint in children, leading to pain and limited hip movement.

Juvenile Idiopathic Arthritis (JIA): A group of chronic inflammatory joint conditions affecting children, characterized by joint pain, swelling, and stiffness.

Lyme disease: Tick-borne infection that can lead to joint inflammation and pain.

Osteomyelitis: Bone infection that may present with joint pain and fever.

Diagnostic tools

To accurately diagnose relapsing synovitis and differentiate it from other joint conditions, various diagnostic tools and tests can be utilized:

Physical examination: Careful examination of the affected joint can provide valuable clues. In relapsing synovitis, there is typically no warmth or redness over the joint, and the range of motion may be limited due to pain.

Laboratory tests: Blood tests can help rule out infection and systemic inflammation. In relapsing synovitis, the Complete Blood Count (CBC) and C-Reactive Protein (CRP) levels are usually within normal limits.

Joint aspiration: If there is any doubt about the diagnosis, joint aspiration can be performed to rule out septic arthritis. The synovial fluid analysis will show an increased white blood cell count in septic arthritis, which is not present in relapsing synovitis.

Imaging: X-rays and ultrasound may be useful in excluding other joint pathologies and detecting any joint effusion. In relapsing synovitis, there are typically no bony abnormalities observed.

Therapeutic considerations

Conservative management: The primary approach in the management of relapsing synovitis is conservative, as the condition is self-limiting in most cases. It involves:

Rest: Encouraging the child to rest and avoid weight-bearing activities to relieve pain and reduce stress on the affected joint.

Pain relief: Nonsteroidal Anti-Inflammatory Drugs (NSAIDs) such as ibuprofen can help alleviate pain and reduce inflammation.

Hot or cold compresses: Applying either warm or cold compresses to the affected joint can provide symptomatic relief.

Follow-up and re-evaluation

Regular follow-up appointments should be scheduled to monitor the progression of symptoms. If there is any atypical clinical course

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Received: 12-Jun-2023, Manuscript No. RCR-23-25378; Editor assigned: 15-Jun-2023, PreQC No. RCR-23-25378 (PQ); Reviewed: 30-Jun-2023, QC No. RCR-23-25378; Revised: 07-Jul-2023, Manuscript No. RCR-23-25378 (R); Published: 14-Jul-2023, DOI: 10.35841/2161-1149.23.13.359

Citation: Huang F (2023) Diagnosis and Therapeutic Considerations of Relapsing Synovitis. Rheumatology (Sunnyvale). 13:359.

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or persistence of symptoms beyond the expected duration, further evaluation should be considered to rule out alternative diagnoses.

Complications

Although relapsing synovitis is generally a benign condition, there can be rare complications such as:

Joint contracture: Prolonged immobilization or limited mobility of the affected joint may result in joint stiffness or contracture.

Recurrence: In a small percentage of cases, relapsing synovitis can recur, necessitating re-evaluation and potential additional investigations.

Psychosocial impact: Prolonged pain and functional limitations can impact a child's daily activities and psychosocial well-being. Supportive care and reassurance are essential components of management.

Relapsing synovitis is a common and typically self-limiting condition affecting children, characterized by transient joint inflammation. Accurate diagnosis is crucial to differentiate it from other joint pathologies that may require more aggressive interventions. A thorough clinical evaluation, along with appropriate laboratory tests and imaging studies, can aid in reaching an accurate diagnosis. Conservative management, including rest, pain relief, and regular follow-up, is the mainstay of treatment.