

REHUMATOID ARTHRITIS



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INTRODUCTION:

Rheumatoid arthritis (RA) is an autoimmune disease that causes chronic inflammation of the joints and other parts of the body. It occurs when the body's immune system mistakenly attacks its own tissues, specifically the synovial membrane that lines the joints. This results in pain, swelling, and stiffness in the affected joints, and over time, can cause damage to the bones and cartilage.

ETIOLOGY:

- **Genetic factors:** Certain genes may make a person more susceptible to developing RA. Studies have shown that people with a family history of RA are more likely to develop the condition themselves.
- **Environmental factors:** Certain environmental factors may trigger or worsen RA symptoms in people who are genetically predisposed to the condition. These factors may include exposure to certain viruses or bacteria, smoking, and exposure to pollutants or chemicals.
- **Lifestyle factors:** Certain lifestyle factors may also play a role in the development of RA. For example, obesity has been linked to an increased risk of RA, as has a sedentary lifestyle.

PATHOPHYSIOLOGY:

- In RA, the immune system mistakenly identifies the synovial membrane as foreign and attacks it, leading to the release of inflammatory cytokines and other immune system cells into the joint space.
- These inflammatory factors cause the synovial membrane to thicken and produce excess synovial fluid, leading to joint swelling and pain.

- Over time, the ongoing inflammation can damage the joint tissues, including the cartilage and bone.
- This can lead to joint erosion, deformities, and loss of function. RA can also affect other parts of the body, such as the eyes, lungs, and heart, due to the systemic inflammation it causes.

CLINICAL MANIFESTATION:

- Joint pain
- Joint swelling
- Joint stiffness
- Fatigue
- Reduced range of motion
- Rheumatoid nodules
- Fever

DIGNOSIS:

- **Family history**
- **Blood tests:** Blood tests can help detect the presence of certain antibodies and markers of inflammation that are associated with RA. These include rheumatoid factor (RF), anti-cyclic citrullinated peptide (anti-CCP) antibodies, and C-reactive protein (CRP) levels.
- **Joint imaging:** Imaging tests such as X-rays, ultrasound, and magnetic resonance imaging (MRI) can help detect joint damage and inflammation.
- **Physical examination:** A physical examination can help detect joint swelling, tenderness, and range of motion, which are all common signs of RA.

- **Synovial fluid analysis:** A sample of synovial fluid (the fluid that surrounds the joints) can be analyzed to check for signs of inflammation and to rule out other conditions such as gout.

PHARMACOLOGICAL MANAGEMENT:

- **Nonsteroidal anti-inflammatory drugs (NSAIDs):** NSAIDs such as ibuprofen, naproxen, and aspirin can help reduce pain and inflammation in the joints. These medications are available over the counter or by prescription.
- **Disease-modifying antirheumatic drugs (DMARDs):** DMARDs such as methotrexate, sulfasalazine, and hydroxychloroquine work to slow down the progression of RA by targeting the underlying immune system dysfunction that causes the inflammation. These medications are often used in combination with other drugs.
- **Biologic response modifiers:** Biologics such as etanercept, adalimumab, and infliximab are a newer class of medications that also target the immune system dysfunction that causes RA. They are given by injection or infusion and are often used in combination with DMARDs.
- **Janus kinase inhibitors:** Janus kinase inhibitors such as tofacitinib and baricitinib work by blocking a certain enzyme involved in the immune response, thereby reducing inflammation and slowing the progression of RA.

NON- PHARMACOLOGICAL MANAGEMENT:

- **Maintaining a healthy weight:** Being overweight or obese may increase the risk of developing RA, and can also worsen symptoms in those who already have the disease.

- **Quitting smoking:** Smoking is a known risk factor for RA and can also make symptoms worse in those who already have the disease.
- **Exercising regularly:** Regular exercise can help reduce joint pain and stiffness, improve mobility and flexibility, and improve overall health and well-being.
- **Eating a healthy diet:** Eating a balanced diet rich in fruits, vegetables, whole grains, and lean protein sources may help reduce inflammation in the body and support overall health.
- **Managing stress:** Stress has been linked to increased inflammation in the body, which can worsen symptoms of RA. Finding healthy ways to manage stress, such as through exercise, meditation, or counseling, may be helpful.