

Evidence Based Physiotherapy Treatment for Ankylosing Spondylitis

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Abstract

Patients with ankylosing spondylitis, have an increased risk of functional limitation if adequate treatment of all functional alterations is not performed. Pain is not the only symptom to be treated in patients with this condition, there are functional alterations characteristic of the disease, as well as alterations of the environment and the role of life that directly influence the well-being and functionality of patients. The main alterations presented by ankylosing spondylitis are pain and stiffness caused by inflammation of the sacroiliac joints, which progressively extends to the other joints of the spine, producing numerous changes in the patient's posture. Physiotherapy treatment in ankylosing spondylitis plays a very important role both in the prevention of the evolutionary process of the disease and in the treatment of the disease once the symptoms have appeared. Thus, one of the tools that the physiotherapist has for the treatment of as in the long term is the therapeutic exercise. A study by Viitanen et al. provides a very important data for our investigation, the results showed that the duration of the disease does not affect the results; or in other words, that the effects of physical exercise on these patients are independent of the progress of the disease, or of the stage of the pathology in which the patient is found, so that age would not be an inconvenience for the inclusion of these patients in a physical exercise program. It should be noted that all the exercises of the program must be related to the alterations that patients of ankylosing spondylitis suffer as a result of it. Not all exercises are beneficial for this affection. The present bibliographic review is accompanied by a proposal based on a series of case studies, the results of which have allowed patients in this condition to maintain an active life with minimal limitations in function.

Keywords: Pain; Sacroiliac joints; Posture; Ankylosing spondylitis; Physiotherapy

Introduction

Ankylosing Spondylitis

It is a type of arthritis which mainly affects the spine, lower back, and sacroiliac joints (located at the base of the spine, where the spine joins to the hips) by causing inflammation. This inflammation results in extra formation of bone in the spine resulting in bone fusion which might eventually lead to chronic pain, stiffness, disability and deformity i.e. it makes the spine stiff and can result in a hunched-forward posture. This chronic autoimmune disorder often lasts a lifetime.

Symptoms and Complications of Ankylosing Spondylitis

Signs and symptoms of Ankylosing Spondylitis: It includes inflammation, pain and stiffness in other areas of the body like neck, shoulders, hips, thigh, knee, heels and small joints of the hands and feet. Pain from this disorder is likely to be long lasting.

Sometimes it affects the eyes and cause eye inflammation called acute iritis. It may even make difficult to breathe deeply, if AS affects ribs and might cause discomfort or pain in coughing or sneezing. Rarely, ankylosing spondylitis can also cause serious complications involving the heart, lungs, and nervous system.

As ankylosing spondylitis involves inflammation, patient may also experience:

- inflammation of the bowels
- mild eye inflammation
- heart valve inflammation
- Achilles tendonitis

As ankylosing spondylitis is a systemic condition, people can experience constitutional symptoms of fatigue, lacking energy, depression and anxiety.

Complications of Ankylosing Spondylitis: Ankylosing spondylitis (AS) triggers painful inflammation throughout the body mostly centered in the back and buttocks. As the disorder progresses, symptoms can spread, with pain and inflammation.

As the condition progresses, unchecked inflammation can contribute to other complications such as neurological, cardiovascular, and pulmonary changes.

During early stages of AS, spinal bones or vertebrae gets thinner in some people and becomes weak, and be more likely to fracture or break. A fractured bone in your spine can cause nerve damage.

Eye inflammation called acute iritis can cause pain and may blur your vision or make you sensitive to bright light (photophobia).

Inflamed aorta can enlarge up to extent such that it changes the shape of the aortic valve in the heart, which impairs its function and can leave you tired and short of breath. It can make you slightly more at risk of heart attack or a stroke.

What Causes Ankylosing Spondylitis

Actual cause is not yet confirmed but ankylosing spondylitis (AS) is likely to be caused by a combination of genetic and environmental factors.

People with variation of HLA-B gene called HLA-B27 are more likely to be at the risk of developing this disorder. Although many

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people with ankylosing spondylitis have the HLA-B27 variation, most of the people with this version of the HLA-B gene never develop the disorder.

The newer key genes including ERAP 1, IL-12, IL-17, and IL-23 are also identified to be associated with ankylosing spondylitis. Although these genes play critical roles in the immune system, it is unclear how variations in these genes affect a person's risk of developing ankylosing spondylitis. Researchers are trying to identify these genes and clarify their role in ankylosing spondylitis.

People who might be at Risk

- Ankylosing spondylitis is more likely to develop in Men than Women.
- It generally occurs in late adolescence or early adulthood (ages 17 to 45).
- A family history of AS
- Testing positive for the HLA-B27 marker

Ankylosing spondylitis is not purely a genetic disease. It can occur in more than one member in a family. Multiple genetic and environmental factors might play a role in determining the risk of developing this disorder. As a result, inheriting a genetic variation linked with ankylosing spondylitis does not mean that a person will develop the condition, even in families in which more than one family member has the disorder. For example, about 80 percent of children who inherit HLA-B27 from a parent with ankylosing spondylitis do not develop the disorder.

Treatment of Ankylosing Spondylitis

There is no cure for AS but medication and physical therapy can relieve symptoms. Staying active and practice good posture can help in managing AS.

Physiotherapy treatment for AS: Physical therapy plays a very important role to help treat the symptoms and prevent risk of functional limitation. A physical therapist can design a program with specific exercises for the spine, hips and shoulders or as per your needs

- They may give you posture training as it can greatly help you in minimizing the long-term effects of this condition.
- Regular exercise is good for the range of movement of your back and to stop your spine from stiffening. Stretching exercises after a hot shower or bath are especially helpful to ease stiffness in the morning.
- Pilates, yoga and t'ai chi could also be useful as these can help with posture, strength and flexibility.
- Hydrotherapy (aquatic therapy) also involves specific exercises for the spine, hips and shoulders carried out in a special warm-water pool. It improves your strength, stamina and flexibility.
- Proper sleeping, walking positions and abdominal and back exercises can help maintain your upright posture.
- Take a low-fat, healthy and balanced diet as being overweight will increase the strain on your back and other joints.
- As ankylosing spondylitis can increase risk of osteoporosis, which makes bones thinner, it's important to get enough calcium to keep your bones healthy.
- Stop smoking as it can make you more at risk of having a heart having a heart or lung problem and is more likely to cause the bones in the spine fuse together.
- Manage stress via massage, yoga, meditation and counseling.
- Heating pads or a warm shower can help ease for stiff joints and tight muscles while ice packs can reduce inflammation in painful or swollen joints.