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Case Report Open Access

# A case report on management of sero negative spondyloarthropathy

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## ABSTRACT

Spondyloarthropathies are a family of long-term (chronic) diseases of joints. These diseases occur in children (juvenile spondyloarthropathies) and adults. They include ankylosing spondylitis, reactive arthritis, psoriatic arthritis, and joint problems linked to inflammatory bowel disease (enteropathic arthritis). Spondyloarthropathies are sometimes called spondyloarthritis.

Although all spondyloarthropathies have different symptoms and outcomes, they are similar in that all of them usually involve the attachments between your low back and the pelvis (sacroiliac joint) and affect areas around the joint where your ligaments and tendons attach to bone (enthesitis), such as at the knee, foot, or hip [4].

We report one such rare presentation of sero negative spondyloarthropathy in a 44 years old man with a history of polyarthritis involving ankles, knees, wrist, MTP joint since 6 months, Joint swelling with early morning stiffness since 3 months, pain at back and sacral region since 1 month and diagnosed with Psoriatic Spondyloarthritis (PSA) + Reactive arthritis and other co morbid conditions like psoriasis, T2DM, Hepatitis A, Kochs TB was treated by Dr. Appa Rao with the protocol involving immunonutritive therapy.

**Keywords:** Spondyloarthropathy, Immunonutritive therapy.

## INTRODUCTION

Spondyloarthritis (or spondyloarthropathy) [1] is the name for a family of inflammatory rheumatic diseases that cause arthritis. It differs from other types of arthritis, because it involves the sites are where ligaments and tendons attach to bones called “entheses.”

Symptoms present in two main ways. The first is inflammation causing pain and stiffness, most often of the spine. Some forms can affect the hands and feet or arms and legs. The second type is bone destruction causing deformities of the spine and poor function of the shoulders and hips. The most common is ankylosing spondylitis, which affects mainly the spine. Others include:

Axial spondyloarthritis, which affects mainly the spine and pelvic joints; Peripheral spondyloarthritis, affecting mostly the arms and legs; Reactive

arthritis (formerly known as Reiter's syndrome); Psoriatic arthritis; and Enteropathic arthritis/spondylitis associated with inflammatory bowel diseases (ulcerative colitis and Crohn's disease). [1, 2, 5]

All patients should get physical therapy and do joint-directed exercises. Most recommended are exercises that promote spinal extension and mobility.

There are many drug treatment options. The first lines of treatment are the NSAIDs, such as naproxen, ibuprofen, meloxicam or indomethacin. No one NSAID is superior to another. Given in the correct dose and duration, these drugs give great relief for most patients.

For joint swelling that is localized (not widespread), injections, or shots, of corticosteroid medications into joints or tendon sheaths (the membrane around a tendon) can be effective quickly.

For patients who do not respond to the above lines of treatment, disease modifying antirheumatic drugs (commonly called DMARDs) such as sulfasalazine (Azulfidine) might be effective. These drugs relieve symptoms and may prevent damage to the joints. This class of drugs is helpful mainly in those with arthritis that also affects the joints of the arms and legs.

Although they may be effective, corticosteroids taken by mouth are not advised. This is because the high dose required will lead to many side effects. Antibiotics are an option only for patients with reactive arthritis.

TNF alpha blockers (a newer class of drugs known as biologics) are very effective in treating both the spinal and peripheral joint symptoms of spondyloarthritis. TNF alpha blockers that the FDA has approved for use in patients with ankylosing spondylitis are:

Infliximab (Remicade), which is given intravenously (by IV infusion) every 6-8 weeks at a dose of 5 mg/kg; Etanercept (Enbrel), given by an injection of 50 mg under the skin once weekly; Adalimumab (Humira), injected at a dose of 40 mg every other week under the skin; Golimumab (Simponi), injected at a dose of 50 mg once a month under the skin [5].

However, anti-TNF treatment is expensive and not without side effects, including an increased risk for serious infections. Biologics can cause patients with latent tuberculosis (no symptoms) to develop an active infection. Therefore, you and your doctor should weigh the benefits and risks when considering treatment with biologics. Those with arthritis in the knees, ankles, elbows, wrists, hands and feet should try DMARD therapy before anti-TNF treatment.

Surgical treatment is very helpful in some patients. Total hip replacement is very useful for those with hip pain and disability due to joint destruction from cartilage loss. Spinal surgery is rarely necessary, except for those with traumatic fractures (broken bones due to injury) or to correct excess flexion deformities of the neck, where the patient cannot straighten the neck. [5]

## CASE PRESENTATION

A 44 year old male patient who is a civil engineer by profession came to Dr. Appa Rao’s clinic on 30 Nov 2011 with complain of swelling of left knee and left ankle and unable to walk freely. He has a history of mild psoriasis since 18 years (1993), recurrent loose stools since 10 years (2001), suffered jaundice ie.,hepatitis in 2004 20 days, Diabetes Mellitus( DM) type II since 5 years (2006), RTA (Road Traffic Accident) fall from bike on 8 Oct 2010 i.e., 1 year back. Since then he has a history of polyarthritis involving ankles, knees, wrist, Metacarpopophalingeal (MTP) Proximal interphalingeal (PIP) joint since 6 months, Joint swelling with early morning stiffness since less than ten minutes since 3 months, pain at back and sacral region since 1 month. He is a smoker since 20years and occasional alcoholic.

He was seen by an orthopedic surgeon and a physician in Visakhapatnam on 11$^{th}$ Oct 2010 and was managed symptomatically with analgesics and crepe bandage for ankle and knee. 15days later he developed vomiting, loose stools, fever headache and myalgia and was managed with Paracetamol 650mg, combination of ofloxacin 200 mg and ornidazole 500 mg, combination of Rabeprazole 20mg and domperidone 10mg, Multivitamin (Zincovit) then he visited another orthopedic surgeon at Hyderabad and was advised for MRI left knee which showed medical meniscus tear and was prescribed with Celecoxib 200mg, combination of Glucosamine(500 mg), and Diacerein(50 mg) and Methyl Sulfonyl Methane(250 mg) calcium supplements and physiotherapy then he was referred to a Rheumatologist where he gave a history of low grade fever and diarrhea at the beginning of polyarthritis of knee and ankle and thus

diagnosed as Reactive arthritis + ligamental injury, post viral fever and post enteritis.

He later developed stiffness of both knee, B/L pedal edema, B/L 1st MTP joint tenderness and was advised for physiotherapy and then he visited another Rheumatologist at Hyderabad on 11 April 2011 where on examination he was found to have developed B/L Sacroilitis, peripheral arthritis and came with c/o severe back pain. Then he was diagnosed as Psoriatic Spondyloarthritis (PSA) + Reactive arthritis.

He was started on Methotrexate and took physiotherapy for 8 months. Later he was found positive for Montoux Test with latent KOCHS and was treated with Folic Acid 5 mg, Sulfasalazine (500mg), levofloxacin 500mg, Rabeprazole 20mg, Metformin 500mg, combination of Calcitriol 0.25mcg + Calcium Carbonate 500mg + Soy Isoflavones 60mg, Prednisolone 5mg, combination of Isoniazid 300mg +Rifampicin 450mg+ethambutol 800mg and paracetamol 500mg.

On 28 Nov 2011 the patient found no improvement and with severe pain and inflammation and in a grave condition visited Dr. Appa Rao's clinic on 30 Nov 2011 where his ESR levels were found to be 150mm/Hr and was started on immunonutritive therapy. After two months the patient condition has improved and his ESR levels has decreased to 50mm/Hr. The patient has resumed to his job and was able to carry on his routine activities satisfactorily.

**Table 1: Laboratory investigations [3, 4]**

| Investigations | Results | Reference |
|---|---|---|
| Haemoglobin | 10.1mg/dl | 14-16mg/dl |
| PCV | 32 % | 42 - 52% |
| TLC | 14000 cells/cumm | 4000-11000 cells/cumm |
| Platelet count | 2.4 lakh cells/cumm | 1.5 – 4. 5 lakh cells/cumm |
| Neutrophils | 80 % | 55-75 % |
| Lymphocytes | 18 % | 20-40% |
| Monocytes | 01 % | 2-10% |
| Eosinophils | 01 % | 0-1% |
| ESR | 120mm/ 1stHr and 150mm/ 2nd Hr | 0-10 mm/Hr |
| FBS | 86 mg/dl | 70-110mg/dl |
| Uric Acid | 2.8 mg/dl | 2.4-6mg/dl |
| Sodium | 137 mmol/L | 135-145mmol/L |
| Potassium | 4.4 mmol/L | 3.8-4.5 mmol/L |
| Chloride | 98 mmol/L | 95 - 105 mmol/L |
| Total Serum Protein | 5.8 mg/dl | 6 - 8.3 mg/dl |
| Albumin | 2.9 g/dl | 3.5 - 5.5 g/dL |
| Bilirubin (T) | 0.2 mg/dl | 0.3 - 1.9 mg/dL |
| ALP | 276 U/L | 44 - 147 U/L |
| SGOT | 10.0 U/L | 0-40U/L |
| SGPT | 14.0 U/L | 0-40U/L |
| TSH | 3.0 mU/L | 0.4 - 4.0 mU/L |

## DISCUSSION

As seronegative Spondyloarthropathies are most protracted and painful with frequent recurrence of the symptoms in nature it is very difficult to treat these cases with the existing regimes. This is a case of seronegative spondyloarthropathy in which the predominant marker is raised ESR values. Various newer therapies are still under study. The protocol designed by Dr. Appa Rao is beneficial to many.

## CONCLUSION

A 44 year old male patient who is a civil engineer by profession came to Dr. Appa Rao's clinic on 30 Nov 2011 with complain of swelling of left knee and left ankle and unable to walk freely. He has a history of mild psoriasis since 18 years (1993), recurrent loose stools since 10 years (2001), suffered jaundice ie.,hepatitis in 2004 20 days, Diabetes Mellitus( DM) type II since 5 years (2006), RTA (Road Traffic

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The patient found no improvement in his condition with the previous treatment and then he visited Dr. Appa Rao's clinic on 30 Nov 2011 where his ESR levels were found to be 150mm/Hr and was started on immunonutritive therapy.

## Treatment schedule and follow up

Injection Human normal immunoglobulin (12 mg) and histamine dihydrochloride (0.15 mcg), (Belongs to any manufacturer). Two vials once in three days (3 doses) followed by two vials once in a week until 8 weeks. Aceclofenac 100mg twice a day for one month. Prednisolone tapered and maintained 5 mg per day. Ranitidine 150 mg once a day in the morning. Methotrexate was stopped. Tomato, Banana fruit, Prawns and milk were restricted in nutrition.

After two months the patient condition has improved and his ESR levels has decreased to 50mm/Hr. The patient has resumed to his job and is able to carry on his routine activities satisfactorily. He is supposed to be on maintenance therapy as he is vulnerable to relapse for any immunological insults.

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