WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.074
Volume 7, Issue 6, 916-919. Case Report ISSN 2277– 7105

SYNOVITIS OF THE KNEE JOINT IN A 13-YEAR-OLD BOY: A CASE REPORT ON ITS ALTERNATIVE THERAPY

Dr. Peddapalli Appa Rao[1] and Dr. Mahwish Jawaid[2]*

[1,2]Research Centre: IMMA Labs, Hyderabad.

Article Received on
24 Jan. 2018,

Revised on 14 Feb. 2018,
Accepted on 06 March 2018,

DOI: 10.20959/wjpr20186-11472

***Corresponding Author**
Dr. Mahwish Jawaid
Research Centre: IMMA Labs, Hyderabad.

ABSTRACT

Osteoarthritis (OA) is the most common form of arthritis worldwide yet there is still a lack of effective treatments for this condition. Increasingly, attention has turned to the role of the synovium in OA as it is now recognized, in part from the use of modern imaging techniques, that synovitis is both common and associated with pain. This offers a target for treatment, for both symptom and potential structure modification.

KEYWORD: Osteoarthritis.

INTRODUCTION

Osteoarthritis (OA) is the most prevalent form of arthritis worldwide, a major cause of joint pain and disability and the most common reason for total hip and knee replacement. OA also has huge economic implications due to an increasing number of joint replacements, increasing hospital charges and an ageing population.[1] OA symptoms however frequently include joint pain, swelling and stiffness, suggestive of at least local inflammation.[2] It is now recognized that synovitis is common in OA, both in early and late OA and this offers a potential target for treatment, both for symptom and potential structure modification.

CASE REPORT

This is a about a 13 year old boy named Master S. He was apparently asymptomatic four years back when suddenly at the age of 8 years developed pain in right knee joint which progressed to joint swelling and difficulty in walking. MRI scan of right knee joint done in June 2013 revealed partial tear with edema and moderate joint effusion. Other joints were normal and asymptomatic. His ESR I hour was 18mm and II hour was 42mm. He consulted many orthopedicians and took medicines but of no use and relief.

His sufferings continued and again in 2016 MRI scan of right knee joint was done which was in favour of moderate effusion around joint suggesting synovitis but no meniscal or ligament tear.

Thus he was advised Quantiferon TB Gold by EIA for synovial fluid analysis and to rule out suspicion of Tuberculosis. But again all reports were within normal limits and TB Gold test was negative.

He consulted with some more doctors for one more year and finally in July 2017 he visited Dr. Appa Rao where he could finally get relieved. He was started with Injection Human normal immunoglobulin (12mg) 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 50mg twice a day for one month. Prednisolone tapered and maintained 5 mg per day. Ranitidine 150 mg once a day in the morning. 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 20mm/Hr. The patient is very well 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.

DISCUSSION

Infiltration of the synovium with activated B cells and T lymphocytes and overexpression of pro-inflammatory mediators is common in both early and late OA.[3]

Higher expression of inflammatory mediators, including interleukin (IL)-1, tumour necrosis factor-alpha (TNF-a), vascular endothelial growth factor (VEGF) and intercellular adhesion molecules.[3]

There is also evidence for T-cell activation and the production of Th1 cytokines (for example, interferon-g) in OA, with T cells and T-cell infiltrates seen in the synovial membrane.[4]

NSAIDs are efficacious at reducing pain in OA.[5] This efficacy is thought to be due to an anti-inflammatory, or anti-synovial, effect. Corticosteroids inhibit the production of proinflammatory chemicals interleukins 1 and 6 and TNF-a as well as decreasing the expression of COX-2. Steroids also inhibit the generation, proliferation and activation of T

cells. A novel drug (CRx-102) combining oral prednisolone (3 mg) and dipyridamole, used to potentiate the action of the steroid.[6] There is limited published evidence for the use of any disease-modifying antirheumatic drugs (DMARDs) in OA. Gold and hydroxychloroquine have been shown to reduce NO production in chondrocyte culture and OA cartilage.[7] a small dose of 7.5 mg methotrexate for painful knee OA and did not demonstrate any reduction in pain.[8]

CONCLUSION

Despite this, there is still a real lack of safe and effective treatments for OA, barring surgery and acetaminophen, and further treatments are desperately required. Over recent years, attention has turned to the importance of synovitis. This immunotherapy has promising results and hence can be used for treating such cases. Further large scale clinical trials are needed to confirm the efficacy of this immunotherapy in treating such cases.

REFERENCES

1. Kim, S. Changes in surgical loads and economic burden of hip and knee replacements in the US: 19972004. Arthritis Rheum, 2008; 59: 481-488.
2. Pelletier, J.P., Martel-Pelletier, J. and Abramson, S.B. Osteoarthritis, an inflammatory disease: potential implication for the selection of new therapeutic targets. Arthritis Rheum, 2001; 44: 1237-1247.
3. Benito, M.J., Veale, D.J., FitzGerald, O., van den Berg, W.B. and Bresnihan, B. Synovial tissue inflammation in early and late osteoarthritis. Ann Rheum Dis, 2005; 64: 12631267.
4. Sakkas, L.I. and Platsoucas, C.D. The role of T cells in the pathogenesis of osteoarthritis. Arthritis Rheum, 2007; 56: 409-424.
5. Zhang, W., Moskowitz, R.W., Nuki, G., Abramson, S., Altman, R.D., Arden, N. et al. OARSI recommendations for the management of hip and knee osteoarthritis, Part II: OARSI evidence-based, expert consensus guidelines. Osteoarthritis Cartilage, 2008; 16: 137-162.
6. Kvien, T.K., Fjeld, E., Slatkowsky-Christensen, B., Nichols, M., Zhang, Y., Proven, A. et al. Efficacy and safety of a novel synergistic drug candidate, CRx-102, in hand osteoarthritis. Ann Rheum Dis., 2008; 67: 942-948.
7. Vuolteenaho, K., Kujala, P., Moilanen, T. and Moilanen, E. Aurothiomalate and hydroxychloroquine inhibit nitric oxide production in chondrocytes and in human osteoarthritic cartilage. Scand J Rheumatol, 2005; 34: 475-479.

8. Holanda, D. Baxia dose de methotrexate comparado a placebo em osteoartrite de joelho. Rev Bras Reumatol, 2007; 47: 334-340.