

Assessment of Efficacy of Aceclofenac versus Diclofenac in Osteoarthritis Patients: A Comparative Analysis

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ABSTRACT

Background: Osteoarthritis is one of the most common, chronic and progressive musculoskeletal disorders. Diclofenac and aceclofenac both fall in the category of nonsteroidal anti-inflammatory drugs (NSAIDs). Hence; the present study was undertaken for assessing and comparing the efficacy of aceclofenac versus diclofenac in osteoarthritis patients.

Materials & Methods: A total of 40 osteoarthritis patients were enrolled in the present study. All the patients were randomized into two study groups; Group A included patients who were treated with Aceclofenac while Group B included patients who were treated with Diclofenac 8 weeks. On follow-up outcome was assessed in terms of Visual analogue score (VAS) and patients response to drug and joint tenderness. Safety assessment was based on adverse events. All the results were recorded in Microsoft excel sheet and were analyzed by SPSS software.

Results: Mean VAS at 8 weeks follow-up was significantly reduced among patients of group A. Group A was associated significantly less incidence of complications.

Conclusion: In treating osteoarthritis patients, aceclofenac is a better choice in comparison to Diclofenac.

Keywords: Aceclofenac, Diclofenac, Osteoarthritis.


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Article History:

Received: 24-07-2017, Revised: 21-08-2017, Accepted: 19-09-2017

Access this article online

Website: www.ijmrp.com	Quick Response code 
DOI: 10.21276/ijmrp.2017.3.5.086	

INTRODUCTION

Osteoarthritis is one of the most common, chronic and progressive musculoskeletal disorders. It usually occurs after the ages of 50. Prevalence of osteoarthritis increases with age and it affects 60% of men and 70% of women after the age of 65. It particularly affects the knee and hip joints in elderly people.¹⁻³ Primary symptoms are joint pain, stiffness, limited movement, and impaired quality of life. Progression of disease can lead to joint failure with pain and disability.⁴

Diclofenac and aceclofenac both fall in the category of nonsteroidal anti-inflammatory drugs (NSAIDs). Diclofenac is advocated for in the treatment of painful and inflammatory rheumatic and certain nonrheumatic conditions such as rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, tendinitis, and bursitis, and in other inflammatory or painful conditions such as strains and sprains, dysmenorrhea, back pain, sciatica, and postoperative pain. It is available in a number of administration forms that can be given orally, rectally, or intramuscularly.^{5,6} Hence; the present study was undertaken for

assessing and comparing the efficacy of aceclofenac versus diclofenac in osteoarthritis patients.

MATERIALS AND METHODS

The present study was undertaken in the Department of Pharmacology, Vedantaa Institute of Medical Sciences, Palghar, Maharashtra (India) and it included assessment and comparison of the efficacy of aceclofenac versus diclofenac in osteoarthritis patients. A total of 40 osteoarthritis patients were enrolled in the present study. All the patients were randomized into two study groups; Group A included patients who were treated with Aceclofenac while Group B included patients who were treated with Diclofenac 8 weeks. On follow-up outcome was assessed in terms of Visual analogue score (VAS) and patients response to drug and joint tenderness. Safety assessment was based on adverse events. All the results were analyzed by SPSS software. Chi-square was used for assessment of level of significance. P-value of less than 0.05 was taken as significant.

RESULTS

In the present study, a total of 40 patients of osteoarthritis were analysed. All the patients were broadly divided into two study groups- group A and group B. Mean age of the patients of the group A and group B was 45.8 years and 47.1 years respectively.

Mean duration of osteoarthritis among the patients of the group A and group B was 12.5 and 10.7 years respective. Mean VAS at 8 weeks follow-up was significantly reduced among patients of group A. Group A was associated significantly less incidence of complications.

Table 1: Clinical data

Parameter	Group A	Group B
Mean age (years)	45.8	47.1
Gender	Males	12
	Females	8
Mean BMI (kg/m ²)	28.9	27.5
Mean duration of osteoarthritis (years)	12.5	10.7

Table 2: Comparison of outcome

Parameter	Group A	Group B	p- value
Mean VAS at baseline	5.8	5.3	0.28
Mean VAS after 8 weeks	2.3	3.9	0.04 (Significant)

Table 3: Comparison of complications

Parameter	Group A	Group B	p- value
Epigastric discomfort	0	3	0.02 (Significant)
Dyspepsia	1	2	

DISCUSSION

Osteoarthritis is a chronic and progressive joint disease. It is established by a complex process involving mechanical and biological alterations of the musculoskeletal system, which are generated by a great variety of interactions between genetic factors and extrinsic injuries. The pathogenesis of this disease is related to an increased and divergent production of inflammatory markers and proteolytic enzymes that promote the degradation and destruction of the extracellular matrix of articular and periarticular tissues.⁷⁻⁹

In the present study, a total of 40 patients of osteoarthritis were analysed. All the patients were broadly divided into two study groups- group A and group B. Mean age of the patients of the group A and group B was 45.8 years and 47.1 years respectively. Mean duration of osteoarthritis among the patients of the group A and group B was 12.5 and 10.7 years respective. Ward DE et al investigated the efficacy and safety of aceclofenac (200 patients, 100 mg twice daily and placebo once daily) in comparison with diclofenac (197 patients, 50mg three times daily) in patients with osteoarthritis of the knee. The treatment period of twelve weeks was preceded by a washout period of two weeks duration. At end point, patients in both aceclofenac and diclofenac-treated groups exhibited significant improvement in pain intensity ($p = 0.0001$). Although both treatment groups showed significant improvement in all investigators' clinical assessments (joint tenderness, swelling, pain on movement, functional capacity, overall assessment), there were no significant differences between the groups. There was, however, a trend towards greater improvement in complete knee movement and reduced pain on movement with aceclofenac. In patients with initial flexion

deformity, aceclofenac was significantly more effective than diclofenac in improving knee flexion after 2-4 weeks treatment. Patients' subjective assessment of pain relief demonstrated significantly greater efficacy with aceclofenac. At end point, 71% of patients in the aceclofenac group reported improvement in pain intensity as compared to 59% treated with diclofenac ($p = 0.005$). Tolerability of aceclofenac was better than with diclofenac as fewer patients experienced gastrointestinal adverse events. In particular, the incidence of treatment related diarrhoea was less with aceclofenac (1%) than the diclofenac (6.6%). In summary, this study supported a therapeutic role for aceclofenac in arthritis and suggested that it is an alternative NSAID to diclofenac in the treatment of osteoarthritis.⁹

In the present study, Mean VAS at 8 weeks follow-up was significantly reduced among patients of group A. Group A was associated significantly less incidence of complications. Diaz C et al assessed the efficacy and tolerability of aceclofenac versus diclofenac in the treatment of knee osteoarthritis. It was a 6 months prospective study that included 355 patients who were randomly allocated to two groups, one group which included 170 patients who received aceclofenac 100 mg b.i.d., whereas the other group consisting 165 patients who received diclofenac 50 mg t.i.d., the assessment was done using Lequesne OA severity index (OSI) and pain on a VAS. Secondary measures used were knee flexion and extension and evaluation of knee function. All parameters were evaluated at baseline, after 15 days and monthly throughout the study, the result from this study showed that there was no statistically significant difference in efficacy between the two groups. However, in assessing the tolerability treatment withdrawals due to AEs (mainly GI) were 14 in the aceclofenac

group patients and 27 in the diclofenac group patients. This indicated that though aceclofenac and diclofenac have similar efficacy, aceclofenac is better tolerated.¹⁰

CONCLUSION

From the above results, the authors conclude that in treating osteoarthritis patients, aceclofenac is a better choice in comparison to Diclofenac. However, further studies are recommended.

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Source of Support: Nil.

Conflict of Interest: None Declared.

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Cite this article as: Palak Agrawal, Amol Ghule. Assessment of Efficacy of Aceclofenac versus Diclofenac in Osteoarthritis Patients: A Comparative Analysis. *Int J Med Res Prof.* 2017 Sept; 3(5): 433-35. DOI:10.21276/ijmrp.2017.3.5.086