(e) ISSN Online: 2321-9599

(p) ISSN Print: 2348-6805

ORIGINAL ARTICLE

Oxaceprol and tramadol in management of Osteoarthritis- A clinical injury

Dushyant Lal

Assistant Professor, Department of Pharmacology, Gold Field Institute of Medical Sciences & Research, , Faridabad, Haryana

***ABSTRACT*:**
Background: Osteoarthritis is a degenerative disease of synovial joints that affects cartilage and bone of both large and small joints. The present study compared Oxaceprol and tramadol in management of OA cases. **Materials & Methods:** The present study was conducted on 108 cases of OA of both genders. Patients were divided into 2 groups. Group I received oxaceprol 200 mg capsule and group II or tramadol 50 mg capsule, thrice daily for 12 weeks. Patients were recalled regularly. In all patients, pain, stiffness, and physical function, measured on 100 mm VAS scale was recorded. **Results:** Out of 108 patients, males were 68 and females were 40. Both groups had 54 patients. The mean WOMAC score pain in group I was 256 which decreased to 225 in group I and 250 which decreased to 201 in group II. The difference was significant (P< 0.05). WOMAC stiffness score in group I was 26.7 which decreased to 21 in group I and 28.3 which decreased to 22.1 in group II. WOMAC physical function score in group I was 912 which decreased to 725 in group I and 890 which decreased to 778 in group II. The difference was significant (P< 0.05). **Conclusion:** Authors found that OA is common phenomenon among patients. Both drugs found to be equally effective in management of cases.
Key words: Oxaceprol, Tramadol, Osteoarthritis

Corresponding Author: Dr. Dushyant Lal, Assistant Professor, Department of Pharmacology, Gold Field Institute of Medical Sciences & Research, , Faridabad, Haryana, India

This article may be cited as: Lal D. Oxaceprol and tramadol in management of Osteoarthritis- A clinical injury. J Adv Med Dent Scie Res 2015;3(4):140-143.

INTRODUCTION

Osteoarthritis is a degenerative disease of synovial joints that affects cartilage and bone of both large and small joints and progressively interferes with the ability to work and depending on the joints involved, the activities of daily living.[1] The primary symptoms are pain and stiffness of the affected joints, secondarily leading to joint dysfunction, deformities, and muscular weakness. It is the most common form of arthritis with approximately 250 million people worldwide conservatively estimated to be suffering from osteoarthritis of the knee alone.[2]

Pain is the main symptom of patients with OA, with significant impact on functional ability, causing severe disability in activities of daily living, and being associated with considerable loss in productivity and decreased quality of life. Considered an age-related disease, it is most likely to affect joints that have been continually stressed throughout the years, including knees, hips, small hand joints, and lower spine region.[3] The traditional pharmacological approach is mostly limited to symptomatic management of pain using analgesics, starting with paracetamol and then moving on to non-steroidal anti-inflammatory drugs (NSAIDs), less potent opioids like tramadol and finally to potent opioids such as oxycodone or hydromorphone.[4] Oxaceprol, a derivative of hydroxyproline ([4R]-1-acetyl-4-hydroxy-L-proline), has been used for the treatment of degenerative joint disease. Tramadol is also widely used in cases of OA.[5] The present study compared Oxaceprol and tramadol in management of OA cases.

MATERIALS & METHODS

The present study was conducted in the department of Pharmacology. It comprised of 108 cases of OA of both genders. The study protocol was approved from institutional ethical committee. All patients were informed regarding the study and written consent was obtained.

General information such as name, age, gender etc. was recorded. A careful examination was done in all patients. Patients were divided into 2 groups. Group I received oxaceprol 200 mg capsule and group II or tramadol 50 mg capsule, thrice daily for 12 weeks. Patients were recalled regularly. In all patients, pain, stiffness, and physical function, measured on 100 mm VAS scale was recorded. Results were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 108		
Gender	**Male**	**Female**
Number	68	40

Table I shows that out of 108 patients, males were 68 and females were 40.

Graph I Distribution of patients

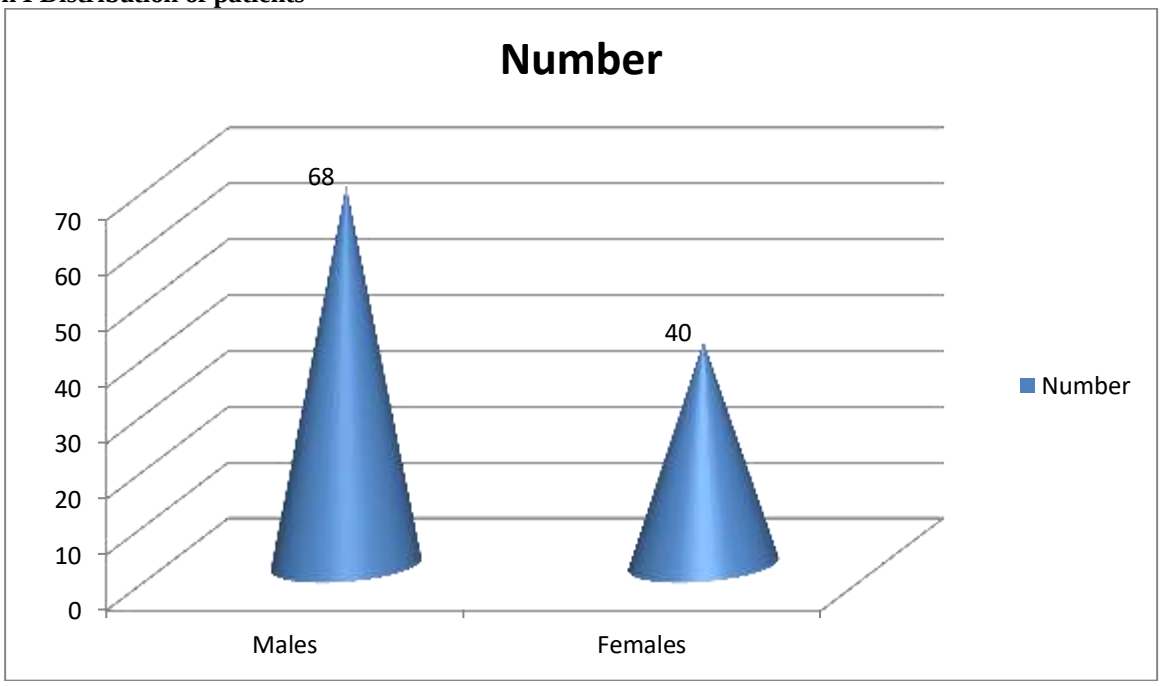


Table II Distribution of patients in groups

Groups	Group I (Oxaceprol)	Group II (Tramadol)
Number	54	54

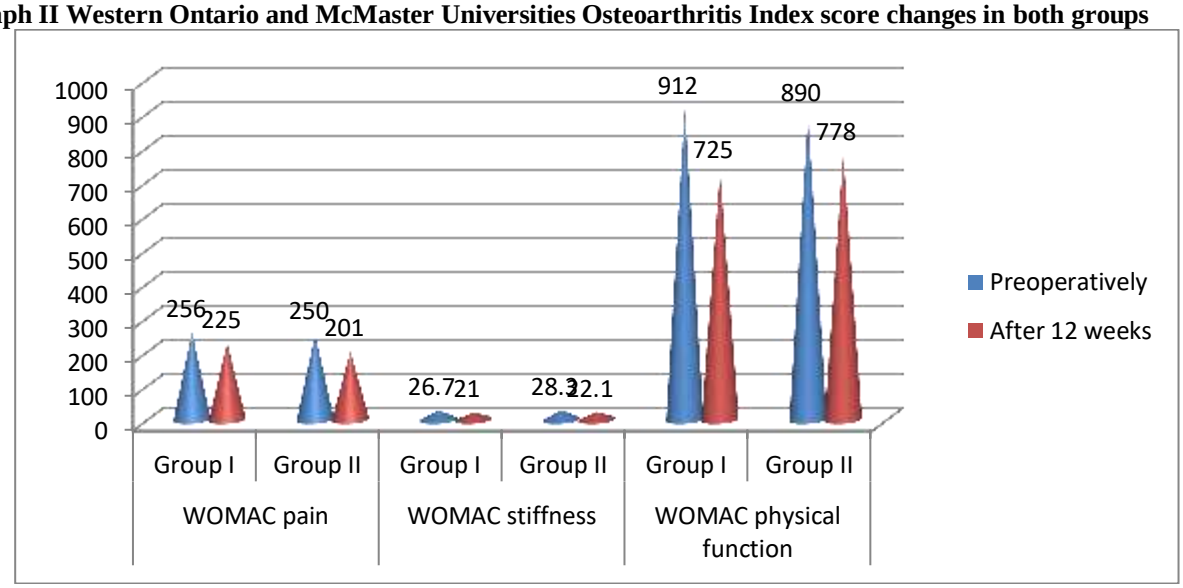
Table II shows that both groups had 54 patients.

Table III Western Ontario and McMaster Universities Osteoarthritis Index score changes in both groups

Parameters	Groups	Preoperatively	After 12 weeks	P value
WOMAC pain	Group I	256	225	0.05
	Group II	250	201	
WOMAC stiffness	Group I	26.7	21.0	0.12
	Group II	28.3	22.1	
WOMAC physical function	Group I	912	725	0.71
	Group II	890	778	

Table III, graph II shows that mean WOMAC score pain in group I was 256 which decreased to 225 in group I and 250 which decreased to 201 in group II. The difference was significant (P< 0.05). WOMAC stiffness score in group I was 26.7 which decreased to 21 in group I and 28.3 which decreased to 22.1 in group II. WOMAC physical function score in group I was 912 which decreased to 725 in group I and 890 which decreased to 778 in group II. The difference was significant (P< 0.05).

Graph II Western Ontario and McMaster Universities Osteoarthritis Index score changes in both groups



DISCUSSION

Topical application of diclofenac or capsaicin and intra-articular injections of corticosteroids and sodium hyaluronate are other options though the efficacy of some of them (like injection of hyaluronic acid into the symptomatic knee joint) is controversial.[6] If the impact of osteoarthritis symptoms on quality of life is significant and conservative management is ineffective, surgical approaches such as osteotomy, resurfacing, or joint replacement can be considered, depending on the joints affected, and the patient's lifestyle. However, osteoarthritis being a widespread disease and joint surgery being a later option available at only a few specialized centers, the quest for new drugs for osteoarthritis must continue.[7]The search for a truly disease modifying anti-osteoarthritis drug remains elusive. The present study compared Oxaceprol and tramadol in management of OA cases.

In this study, out of 108 patients, males were 68 and females were 40. Both groups had 54 patients. A et al[8] found that the primary efficacy variable was symptom relief as assessed by Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) version 3.1 for pain, stiffness, and physical function. Responder rate (50% pain relief), patient's Clinical Global Impression (CGI), and rescue medication use were other outcomes measured. Vital signs, routine blood counts, tests of hepatorenal function and treatment-emergent adverse events were recorded for safety assessment. From 91 patients recruited, 43 on oxaceprol and 36 on tramadol were evaluable. The WOMAC scores declined significantly from baseline in each arm but remained comparable between groups throughout the 12-week study period. The CGI ratings and 50% responder rates were also comparable at the final visit. Differences in dose up-titration and rescue medication requirements were statistically non-significant. So also were the adverse event counts. Compliance was satisfactory in both groups.

We found that mean WOMAC score pain in group I was 256 which decreased to 225 in group I and 250 which decreased to 201 in group II. The difference was significant (P< 0.05). WOMAC stiffness score in group I was 26.7 which decreased to 21 in group I and 28.3 which decreased to 22.1 in group II. WOMAC physical function score in group I was 912 which decreased to 725 in group I and 890 which decreased to 778 in group II.

Bauer et al[9] compared oxaceprol (200 mg thrice daily) with diclofenac (25 mg thrice daily) over 3 weeks in a multicenter, randomized, double-blind, study in Germany. Joint function, evaluated by Lequesne's indices, improved clinically in both treatment arms. In both groups VAS score for pain was reduced nearly 50%, joint mobility improved nearly 60% and pain-free walking period more than doubled. Differences between groups were not significant. The incidence of ADRs was similar in both groups but oxaceprol.

The oxidative damage that occurs with age is one of the main responsible for the development of OA. Women are more likely to have OA than men and also to develop more severe forms of disease. The results from this study confirm these findings with prevalence of OA being higher in women than in men, in line with results reported from other countries. Also in line with other studies, age was associated with OA, with a higher median age in subjects with OA.[10]

CONCLUSION

Authors found that OA is common phenomenon among patients. Both drugs found to be equally effective in management of cases.

REFERENCES

1. Bijlsma JW, Berenbaum F, Lafeber FP. Osteoarthritis: an update with relevance for clinical practice. Lancet. 2011;377:2115–26.
2. Guermazi A, Niu J, Hayashi D, Roemer FW, Englund M, Neogi T, et al. Prevalence of abnormalities in knees detected by MRI in adults without knee osteoarthritis: population based observational study (Framingham Osteoarthritis Study). BMJ. 2012;345:e5339.
3. DiBonaventura MC, Gupta S, McDonald M, Sadosky A. Evaluating the health and economic impact of osteoarthritis pain in the workforce: results from the National Health and Wellness Survey. Musculoskelet Disord. 2011;12:83.
4. Mannoni A, Briganti MP, DiBari M, Ferruci L, Costanzo S, Serni U, et al. Epidemiological profile of symptomatic osteoarthritis in older adults: a population based study in Dicomano, Italy. Ann Rheum. 2003;62:576–8.
5. Nguyen UD, Zhang Y, Zhu Y, Niu J, Zhang B, Aliabadi P, et al. Increasing prevalence of knee pain and symptomatic knee osteoarthritis. Ann Intern Med. 2011;155:725–32.
6. Sowers MF, Karvonen-Gutierrez CA. The evolving role of obesity in knee osteoarthritis. Curr Opin Rheumatol. 2010;22:533–7.
7. SmithSR, DeshpandeBR, CollinsJE, KatzJN, LosinaE. Comparative pain reduction of oral non-steroidal anti-inflammatory drugs and opioids for knee osteoarthritis: Systematic analytic review. Osteoarthritis Cartilage 2012;24:962-72.
8. Kongtharvonskul J, Anothaisintawee T, McEvoy M, Attia J, Woratanarat P, Thakkinstian A. Efficacy and safety of glucosamine, diacerein, and NSAIDs in osteoarthritis knee: A systematic review and network meta-analysis. Eur J Med Res 2012;20:24.
9. Bauer HW, Klasser M, von Hanstein KL, Rolinger H, Schladitz G, Henke HD, et al. Oxaceprol is as effective as diclofenac in the therapy of osteoarthritis of the knee and hip. Clin Rheumatol 1999;18:4-9.
10. Cepeda MS, Camargo F, Zea C, Valencia L. Tramadol for osteoarthritis. Cochrane Database Syst Rev 2006;(3):CD005522.