Available online at: http://www.iajps.com   *Research Article*

A STUDY ON THE PRESCRIBING PATTERN OF DRUGS USED FOR ARTHRITIS IN POKHARA VALLEY

Pawana Poudel[1], Nissa parajuli[1], Ashmita Pahari[1], Muna Poudel[1], Bishnu Raj Tiwari[2], Anil Giri[2], & Suresh Jaiswal[2*]

[1]Pharmacy Scholar, School of Health and Allied Sciences, Faculty of Health Science, Pokhara University, Kaski, Nepal.

[2]School of Health and Allied Sciences, Faculty of Health Science, Pokhara University, Kaski, Nepal.

Abstract:

This study was conducted about the prescription pattern of drugs used in arthritis to obtain information about various anti-arthritis drugs prescribing pattern, to calculate the average number of anti-arthritis drugs per prescription and to find out the drug-drug interaction present in the each prescription. The study was carried out in the department of Orthopedics outpatient in Western regional hospital, Pokhara, Nepal. A Prospective, Observational study was carried from March 2017 to August 2017. The data was collected from the prescription and the information was recorded as age, sex, associate illness, laboratory measurements and study of prescription, type of arthritis.

The results showed that out of 102 arthritis people enrolled 67(62.7%) were female and 38 (37.2%0 were male. Highest number of attendant were of the age below 50 i.e. is 43. Of which 96 (94.1%) and 6 95.9%) were married and unmarried respectively. Highest number of patients was illiterate 51(50%). Out of which 58 were house wife followed by 23 employed and 21 non-employed. 12.8% had smoking habit and 13.7% had alcohol consumption habit. 83(81.4%) had no family history and 19(18.6%) had family history of arthritis. Most common types of arthritis observed were OA 71(69.6%), RA 21(20.6%), GA 8(7.8%) and PA 2(2.0%) respectively. As anti gastritis pantaprazole users were 77(75.5%) as highest comparatively.Among pain killers Aceclofenac were 19(18.6%) as highest users. As pain killer gels and ointment Diclofenac users were highest. Calcium 25 (24.55) were highest users as nutritional supplements. Glucosamine was used as most specific drug to treat arthritis were 12 (11.8%). Blood pressure was seen highest complication in these cases.

There is the need of useful method of diagnosis of arthritis and prescription drugs as it shows multiple drugs interaction were high comparatively.

Key words: *Arthritis, Prescribing pattern, Adverse reactions, Drug use patterns, Drug utilization studies*

Corresponding author:

Suresh Jaiswal,
Lecturer, School of Health and Allied Sciences,
Faculty of Health Science, Pokhara University,
Kaski, Nepal. Email info: suuress@gmail.com,
contact info: +977-9843019151.

QR code

*Please cite this article in press as Suresh Jaiswal et al, **A Study on the Prescribing Pattern of Drugs Used for Arthritis in Pokhara Valley**, Indo Am. J. P. Sci, 2017; 4(09).*

INTRODUCTION:

Arthritis is creating a serious health crisis that affects millions of people of all ages, genders, races and ethnic groups – and it's growing. As America's number one cause of disability, arthritis can seriously limit people's mobility – preventing them from walking, climbing stairs, bathing, getting dressed, preparing meals and living live to its fullest. Arthritis is a group of serious diseases that steals people's quality of life [1].

There are six main types of arthritis. Rheumatoid arthritis is a systemic autoimmune disease that presents as a symmetrical inflammatory polyarthritis which affects the smaller joints such as hands and feet first, before affecting larger joints [2]. Osteoarthritis is characterized by degeneration of the joints such as the knee and the hip [3]. Juvenile arthritis comprises a range of arthritic disorders affecting children and adolescents below the age of 16 years [4]. Psoriatic arthritis is a form of arthritis affecting people with psoriasis, a skin disorder [5]. Gouty arthritis, or simply gout, is associated with the deposition of monosodium urate crystals in the tissues and joints [6]. Ankylosing spondylitis is an axial arthritis, which affects the vertebra causing inflammatory spinal pain and limited spinal and chest wall movements [7, 8].

Periodic evaluation of drug utilization patterns need to be done to enable suitable modifications in prescription of drugs to increase the therapeutic benefit and decrease the adverse effects. The study of prescribing patterns seeks to monitor, evaluate and if necessary, suggest modifications in the prescribing behavior of medical practitioners to make medical care rational and cost effective [9].

Rational drug prescribing can be defined as appropriate drugs prescribed in the right dose, at correct time intervals and for a sufficient duration. Irrational drug use is a common problem in many countries of the world [10]. The assessment of drug utilization is important for clinical, economic and educational purposes [11]. Drug utilization studies aim to provide feedback to the prescriber and to create awareness among them about rational use of medicines [12, 13].

The aim of this research was to study the recent trends in pattern of drug prescribing in arthritis patients in orthopedic outpatient department in Western regional hospital, Pokhara, Nepal.

METHODOLOGY:

This study was carried out in the department of Orthopedics outpatient department in Western regional hospital, Pokhara, Nepal. A Prospective, Observational study was carried from March 2017 to August 2017. It covers prescriptions of patients attending the Orthopedic OPD.

This was a hospital based, Prospective, Observational study reviewing 102 prescriptions of arthritis patients. Patients diagnosed with arthritis were enrolled in the study considering the inclusion and exclusion criteria.

Age above 18 years of age, males & females, patients treated for arthritis that is managed conservatively, patients who are willing to participate in the study, patients treated with oral formulation were included in this study.

Patients below 18 years of age, patients who were not willing to participate in the study, patients with arthritis with surgical indications, patients with cronic diseases, patients with past renal disease, and patients with past liver disease were excluded in the study.

The following parameters were recorded Age, Gender, Diagnosis, Number of drugs prescribed, and Type of therapy- monotherapy or combination therapy

RESULTS AND DISCUSSION:

Patients diagnosed with arthritis were enrolled in the study. Out of 102 arthritis patients enrolled 67(62.7%) were female and 38 (37.2%0) were male. Highest number of attendant were of the age below 50 i.e. is 43. Of which 96 (94.1%) and 6(5.9%) were married and unmarried respectively. Highest number of patients was illiterate 51(50%). Out of which 58 were house wife followed by 23 employed and 21 non-employed. 12.8% had smoking habit and 13.7% had alcohol consumption habit as shown in table 1.
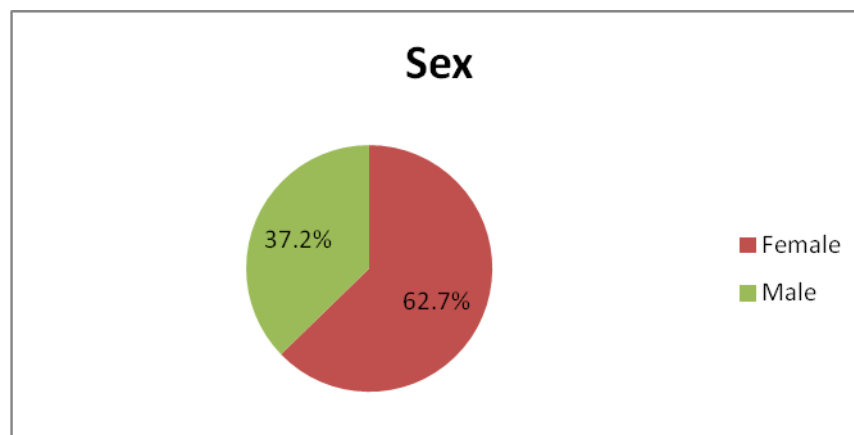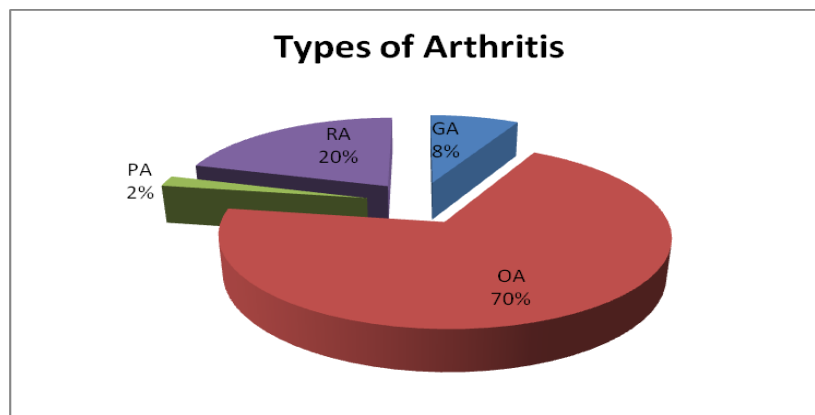
Fig. 1: Shows the distribution of sex.

Table 1: Shows the demographic status of the attendant relation to age, sex, marital status, literacy, alcohol consumption and smoking habit.

Marital status		
Particulars	**Frequency**	**Percent**
Married	96	94.1
Unmarried	6	5.9
Total	102	100.0
Education		
Illitrate	51	50.0
Literate	3	2.9
Primary	36	35.3
Secondary	12	11.8
Total	102	100.0
Employment		
Employed	23	22.5
House wife	58	56.9
Unemployed	21	20.6
Total	102	100.0
Alcohol habit		
Past	22	21.6
Yes	14	13.7
No	66	64.7
Total	102	100.0
Smoking habit		
Past	24	23.5
Yes	13	12.8
No	65	63.7
Total	102	100.0
Categorization of age		
Less than 50	43	42.2
50-60	30	29.4
60-70	23	22.5
More than 70	6	5.9
Total	102	100.0

Table 2: Shows 83(81.4%) had no family history and 19(18.6%) had family history of arthritis. OA 71(69.6%), RA 21(20.6%), GA 8(7.8%) and PA 2(2.0%) respectively. Pantoprazole as anti gastritis were 77(75.5%) comparatively. Aceclofenac as pain killer were 19(18.6%) as highest users.

Family history		
	Frequency	**Percent**
No	83	81.4
yes	19	18.6
Total	102	100
Types of Arthritis		
GA	8	7.8
OA	71	69.6
PA	2	2.0
RA	21	20.6
Total	102	100.0
Anti-Gastritis		
Pantoprazole	77	75.5
Rabeprazole	11	10.8
No	14	13.7
Total	102	100.0
Analgesics		
Aceclofenac	19	18.6
Codein	1	1.0
Eteriocoxib	8	7.8
Flexon	1	1.0
Indomethacin	8	7.8
Naproxen	33	32.4
Naproxen, Aceclofenac	1	1.0
Paracetamol	1	1.0
Paracetamol, Codein	1	1.0
Piroxicam	17	16.7
Piroxicam, Aceclofenac	3	2.9
Tizanidine	1	1.0
Tramadol	1	1.0
No	7	6.9
Total	102	100.0

Fig. 2.: Shows the different types of arthritis distribution.

Table 3: Shows the different users of gels and oils as pain killer of diclofenac gel users were highest.

Gels, Oils and Ointment		
Names	**Frequency**	**Percent**
Diclofenac gel	13	12.7
Diclofenac gel, Ortho Oil	2	2.0
Diclofenac gel. Ortho Oil	2	2.0
Diclofenal gel	1	1.0
Mescodone ointment	3	2.9
No	70	68.6
Ortho Oil	11	10.8
Total	102	100.0
Antidepressants		
Amitryptiline	5	4.9
No	97	95.1
Total	102	100.0

Table 4: Shows the nutritional supplements of which calcium 25 (24.55) were highest users.

Nutritional Supplements		
	Frequency	Percent
calcium	25	24.5
Calcium, Vitamins	3	2.9
Vitamins	3	2.9
No	71	69.6
Total	102	100.0

Table 5: Shows the use of different specific drugs of which Glucosamine users were 12 (11.8%).

Some Specific Drugs		
Names	**Frequency**	**Percent**
Amlodipine	2	2.0
Glucosamine	12	11.8
Domperidone	3	2.9
Gabapentin	2	2.0
Sulfasalazine	2	2.0
Sulfasalazine, Glucosamine	1	1.0
No	80	78.4
Total	102	100.0

Table 6: Shows the complication in the case of arthritis blood pressure along was seen high.

Complications		
Names	Frequency	Percent
B P,gastritis	1	1.0
B.P	17	16.7
B.P, Asthma	1	1.0
B.P, Thyroid, Gastritis	1	1.0
B.P,Thyroid,Cholesterol	1	1.0
Diabetes,B.P	1	1.0
Gastritis	4	3.9
Piles	1	1.0
Thyroid	1	1.0
Thyroid, B.P	1	1.0
Thyroid, Diabetes, B.P	1	1.0
Thyroid,Gastritis	1	1.0
No	71	69.6
Total	102	100.0

REFRENCES:

1.Gaston JS. Cytokines in arthritis—the 'big numbers' move centre stage. Rheumatology. 2007 Aug 22;47(1):8-12.

2.Symmons D, Mathers C, Pfleger B. Global Burden of Rheumatoid Arthritis in the Year 2000. WHO Report 2006. Available: www.who.int/healthinfo/statistics/bod_rheumatoidart hritis.pdf. Accessed 2014 December 19.

3.Cameron M, Chrubasik S. Topical herbal therapies for treating osteoarthritis. The Cochrane databaseof systematic reviews. 2013; 5:CD010538. Epub 2013/06/04. doi: 10.1002/14651858.cd010538 PMID: 23728701; PubMed Central PMCID: PMCPMC4105203.

4.Petty RE, Southwood TR, Baum J, Bhettay E, Glass DN, Manners P, et al. Revision of the proposedclassification criteria for juvenile idiopathic arthritis: Durban, 1997. J Rheumatol. 1998; 25(10):1991–4. Epub 1998/10/21. PMID: 9779856.

5.Moll JM, Wright V. Psoriatic arthritis. Semin Arthritis Rheum. 1973; 3(1):55–78. Epub 1973/01/01. PMID: 4581554.

6.Wallace SL, Robinson H, Masi AT, Decker JL, McCarty DJ, Yu TF. Preliminary criteria for the classification of the acute arthritis of primary gout. Arthritis Rheum. 1977; 20(3):895–900. Epub 1977/04/01. PMID: 856219.

7.Malinowski KP, Kawalec P. The indirect costs of ankylosing spondylitis: a systematic review and metaanalysis. Expert review of pharmacoeconomics & outcomes research. 2015:1–16. Epub 2015/01/13. doi: 10.1586/14737167.2015.1001370 PMID: 25579502.

8.Usenbo A, Kramer V, Young T, Musekiwa A. Prevalence of arthritis in Africa: a systematic review and meta-analysis. PLoS One. 2015 Aug 4;10(8):e0133858.

9.Srishyla MV, Krishnamurthy M, Naga Rani MA, Clare M, Andrade C, Venkataraman BV. Prescription audit in an Indian hospital setting using the DDD (defined daily dose) concept. Indian J Pharmacol 1994; 26: 23-28.

10.Hogerzeil HV. Promoting rational prescribing: an international perspective. Br J Clin Pharmacol 1995; 39: 1-6.

11.Uppal R, Nayak P, Sharma PL. Prescribing trends in internal medicine. Int J Clin Pharm Ther Toxicol 1984; 22: 373-376.

12.Pradhan SC, Shewade DG, Shashindran CH, Bapna JS. Drug utilization studies. Natl Med J India 1988; 1: 185-189.

13.Shankar PR, Pai R, Dubey AK, Upadhyay DK. Prescribing patterns in the orthopaedics outpatient department in a teaching hospital in Pokhara, western Nepal.