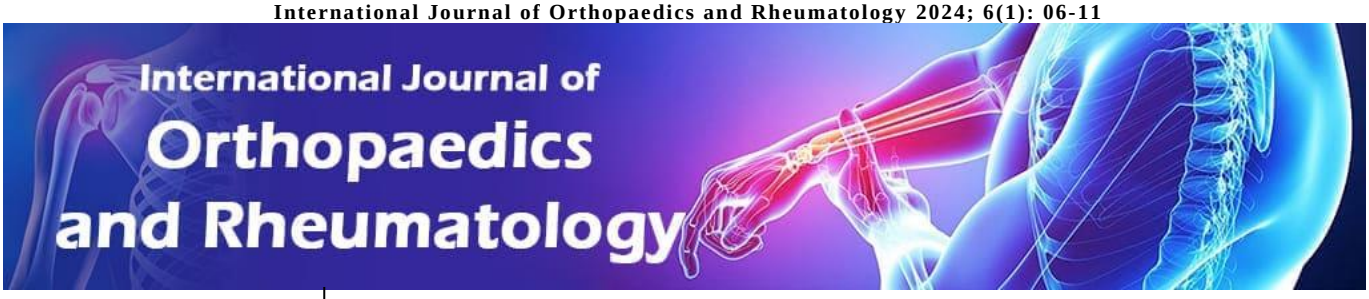

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Dr. Manjula S
Sr. Vice President, Department of Medical Services, Micro Labs Limited, Bangalore, Karnataka, India

Krishna Kumar M
Sr. General Manager, Department of Medical Services, Micro Labs Limited, Bangalore, Karnataka, India

Corresponding Author:
Dr. Manjula S
Sr. Vice President, Department of Medical Services, Micro Labs Limited, Bangalore, Karnataka, India

Expert opinion on the usage of analgesics for the management of pain in Indian settings

Dr. Manjula S and Krishna Kumar M

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Abstract
Objective: This study aims to gather diverse perspectives from experts regarding the utilization of analgesics for pain management within Indian contexts, with a specific emphasis on the prescription patterns of etoricoxib.
Methodology: A multi-response questionnaire-based survey, consisting of 17 questions, was employed to solicit expert opinions from pain management specialists across different Indian settings. The collected data encompassed current feedback, clinical observations, and experiences to evaluate the utilization of analgesics.
Results: The majority of the participants (86%) preferred using tablets to manage chronic pain. Approximately 50% of respondents identified gastritis and 49% identified gastrointestinal (GI) discomfort as the most commonly reported adverse effects of non-steroidal anti-inflammatory drugs (NSAIDs). Nearly 55% of participants stated that topical treatments are effective for treating acute pain. Additionally, 61% of respondents recommended using diclofenac as the preferred NSAID for topical pain management. Around 87% of the participants recommended using a combination of etoricoxib and thiocolchicoside as NSAIDs and muscle relaxants. According to 79% and 73% of respondents, etoricoxib is the most recommended analgesic for treating low back pain (LBP) and pain associated with osteoarthritis (OA) respectively. The most frequently prescribed etoricoxib dosage is 90 mg, as 74% of the clinicians indicated. The majority of the respondents (64%) suggested a one-month duration of etoricoxib for arthritis patients. Approximately 43% and 42% of participants recognized the favorable impacts of etoricoxib usage, encompassing effective pain alleviation and a decrease in gastric side effects.
Conclusion: As per the expert consensus, a combination of etoricoxib and thiocolchicoside is recommended as NSAIDs and muscle relaxants. Experts advocated a one-month course of 90 mg of etoricoxib for pain management Etoricoxib stands out as an efficient pain management medication, especially for LBP and OA, due to its potent analgesic impact and its ability to minimize gastric side effects.

Keywords: Pain, low back pain, osteoarthritis, analgesics, etoricoxib

Introduction
Pain is a common condition that can significantly impact physical, emotional, social, and psychological well-being. It impairs everyday activities, often leading to feelings of depression, reduced social engagement, and a diminished quality of life [1]. According to the 2016 Global Burden of Disease Study, pain and pain-related disorders are the greatest cause of disability and disease burden globally. The global burden of chronic pain is increasing, with 1.9 billion individuals plagued by the most frequent chronic symptoms, recurring tension-type headaches. Low back and neck pain continues to be the primary causes of disability worldwide, with additional chronic pain syndromes prominently included among the top ten impairments [2]. Low back pain (LBP) is still the primary cause of years lived with disability (YLDs) worldwide. In 2020, 619 million individuals worldwide suffered from LBP, accounting for about 10% of the global population, and by 2050, that figure is predicted to rise to 843 million [3]. A study by Mohanty *et al*, reported that 36.6% of older individuals in India were frequently bothered by pain, and 25.2% had discomfort that limited their typical activity. 73.3% of those often disturbed by pain and 76.4% of those with pain that hindered typical activities received therapy [4].

Non-steroidal anti-inflammatory drugs (NSAIDs) are the cornerstone of pain care across the world, primarily used to treat inflammatory, acute, and chronic pain, either alone or in combination with other analgesic-antipyretics or opioids. NSAIDs block prostaglandin production, explaining their analgesic, antipyretic, and anti-inflammatory actions [5, 6].

Etoricoxib is a cyclooxygenase-2 (COX-2) selective NSAID with a greater COX-1 to COX-2 selectivity ratio than other COX-2 selective NSAIDs and a decreased risk of gastrointestinal (GI) effects when compared to standard NSAIDs.[7] Previous studies have confirmed that etoricoxib was associated with improvements in physical functioning and quality of life with enhanced pain relief, joint function, quality of life, and treatment satisfaction in osteoarthritis (OA) patients, as well as providing excellent quality pain relief following surgery and decreasing the severity of persistent LBP [7-9].

The present survey study evaluated the opinions of clinicians on preferred analgesics (NSAIDs) in pain management, with a specific focus on the usage of etoricoxib in real-time clinical practice in an Indian setting.

Methodology

A cross sectional, multiple-response questionnaire based survey among physicians specialized in pain management in the major Indian cities from June 2022 to December 2022.

Questionnaire

The questionnaire booklet titled "Always in action" was sent to the doctors who were interested to participate. The questionnaire consisted of 17 questions that focused on the recommended analgesics (NSAIDs) drugs by clinicians in pain management in low back aches, OA, and the usage of etoricoxib therapy in their clinical practice. The study was performed after obtaining approval from Bangalore Ethics, an Independent Ethics Committee which was recognized by the Indian Regulatory Authority, Drug Controller General of India.

Participants

An invitation was sent to professionals across India based on their expertise and experience in pain management. About 121 clinicians from major cities of all Indian states representing the geographical distribution shared their willingness to participate and provide necessary data. Clinicians were instructed to answer the questionnaire on their own, without contacting any of their colleagues. Prior to the study's implementation, each doctor provided their written informed permission.

Statistical analysis

The data were analyzed using descriptive statistics. Categorical variables were presented as percentages to provide a clear understanding of their distribution. The frequency of occurrence and the corresponding percentage were used to represent the distribution of each variable. To visualize the distribution of the categorical variables, pie, and bar charts were created using Microsoft Excel 2013 (version 16.0.13901.20400).

Results

The majority of the respondents (42%) stated that they treat more than 30 patients for LBP in a month. Approximately 46% of the respondents reported they treat 20-30 patients with OA each month. According to 69% of respondents, a sedentary lifestyle is the leading cause of LBP, whereas 16% and 8% of the clinicians attributed it to incorrect postures and injuries, respectively. Gastritis and GI discomfort were indicated as the most prevalent adverse effects of NSAIDs by 50% and 49% of respondents respectively. Pantoprazole was recommended by 89% of respondents as a proton pump inhibitor to be used in conjunction with NSAIDs. The majority of the respondents agreed that topical formulations are preferred for acute pain management, and diclofenac is the recommended topical NSAID for treatment. A large proportion of clinicians (86%) suggested tablets as the mode of administration to address chronic pain, whereas 7% each advocated intravenous and transdermal patch, respectively.

Among the analgesics, the majority of the clinicians (79%) recommended etoricoxib for the treatment of LBP, whereas the remaining 11% and 9% indicated tramadol and aceclofenac, respectively. For pain treatment in OA, 73% of responders recommended etoricoxib medication, while the remaining 24% suggested tramadol (Table 1). Approximately 74% of the clinicians suggested etoricoxib for LBP, whereas 17% and 7% indicated etoricoxib treatment for OA and rheumatoid arthritis, respectively (Fig. 1).

Table 1: Distribution of response to recommended analgesics for the treatment of low back pain and osteoarthritis pain

Analgesics	Responses (n=121)	
	Low backache	Osteoarthritis
Tramadol	13 (10.74%)	29 (23.96%)
Etoricoxib	96 (79.33%)	88 (72.72%)
Aceclofenac	11 (9.09%)	1 (0.82%)
Ibuprofen	0	3 (2.47%)
Any other	1 (0.82%)	0

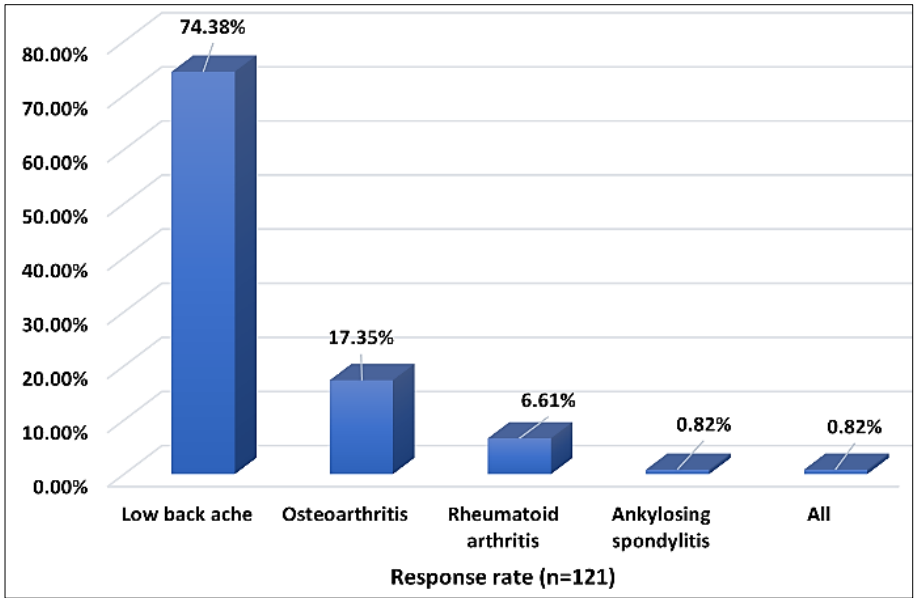

Fig 1: Distribution of response for conditions indicated for etoricoxib

Approximately 32%, 27%, and 20% of clinicians observed in their clinical practice that 25-50, 50-75, and 75-100 patients are on etoricoxib in a month. According to 40% of respondents, etoricoxib is often prescribed for 5-10 days. Nearly 87% preferred the NSAID and muscle relaxant combination of etoricoxib and thiocolchicoside. The majority of the clinicians (74%) reported etoricoxib 90 mg as the most commonly used dose (Table 2) and 69% of the respondents recommended the same dosage for managing arthritis. Approximately 64% stated that the recommended duration of etoricoxib treatment for arthritis patients is one month (Table 3).

Table 2: Distribution of response to commonly used dosage of etoricoxib

Dosage	Responses (n=121)
30 mg	9 (7.43%)
60 mg	20 (16.52%)
90 mg	90 (74.38%)
120 mg	2 (1.65%)
Any other	0

Table 3: Distribution of response to course duration of etoricoxib in arthritis patients

Course duration	Responses (n=121)
1 month	78 (64.46%)
2 months	30 (24.79%)
3 months	12 (9.91%)
6 months	1 (0.82%)

Approximately 43% and 42% of the participants reported effective analgesic impact and reduced gastric side effects as the advantages of administering etoricoxib, respectively, while the remaining 14% noted quick pain alleviation (Fig. 2).

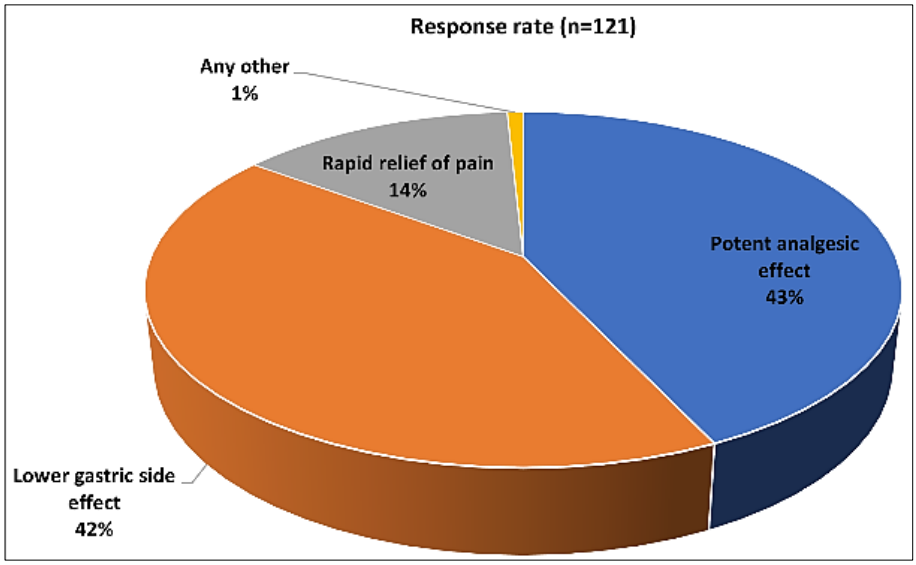

Fig 2: Distribution of response to benefits observed with etoricoxib

Discussion

The current study experts recommended the use of etoricoxib as an effective analgesic for the management of both LBP and OA. Huang *et al*. reported that pain, joint function, quality of life, and treatment satisfaction considerably improved in elderly patients with OA after switching to etoricoxib [7]. A randomized controlled trial by Pallay *et al*. showed that etoricoxib significantly reduced the signs and symptoms of chronic LBP, with effects observed after one week, confirmed after four weeks, and sustained for three months [9]. Etoricoxib 60 mg once a day for four weeks is as effective as high-dose diclofenac 150 mg daily for adult patients with chronic LBP in terms of pain reduction and improved physical function [10]. A clinical trial study comprising 319 individuals with chronic LBP supports the use of etoricoxib as a useful and generally well-tolerated treatment for persistent LBP and for reducing associated functional impairment [11]. Puopolo *et al*. reported in a study, for the treatment of OA of the hip and knee, therapy with etoricoxib 30 mg demonstrated greater efficacy compared to placebo and equivalent clinical efficacy compared to ibuprofen 2400 mg [12]. A real-world effectiveness trial indicated that pain, function, quality of life, and treatment satisfaction all significantly improved in OA patients who were receiving insufficient pain relief from a wide range of analgesics when they switched to etoricoxib [13]. Multiple clinical trial studies have reported the effectiveness of etoricoxib in patients with OA [14-17]. In individuals with OA, etoricoxib medication for 6 to 12 weeks significantly outperformed placebo in terms of effectiveness and was just as effective as diclofenac, ibuprofen, naproxen, or celecoxib. Etoricoxib reduced pain severity and improved functional abilities in patients with LBP [18].

One-third of patients using NSAIDs experience symptoms of foregut dyspepsia, including epigastric pain, bloating, postprandial nausea, early satiety, and belching, as well as gastroesophageal reflux symptoms such as heartburn and regurgitation [19]. A meta-analysis by Huang *et al*. reported that gastric or duodenal ulcers were observed in approximately one-third of individuals using NSAIDs for the long term [20]. The data from the meta-analysis by Ofman *et al*. also supported the link between the use of NSAID and serious upper GI complications [21]. In the present study, etoricoxib and thiocolchicoside are recommended by experts as the preferred NSAID and muscle relaxant combination. A comparative study by Priyanka *et al*. reported that for the treatment of patients with painful muscle spasms, the combination of etoricoxib and thiocolchicoside provided more effectiveness with quicker pain relief when compared to thiocolchicoside monotherapy [22].

According to the present survey, the recommended dosage for etoricoxib in clinical practice is 90 mg, and a one-month course. Curtis *et al*. reported in a double-blind study that etoricoxib maintained significant clinical effectiveness in OA patients over 52 weeks of therapy at dosages ranging from 30 to 90 mg.[23] In patients with OA, the EDGE trial found that etoricoxib 90 mg had a lower risk of discontinuation due to GI side effects compared to diclofenac 50 mg [24]. Clinical trial studies reported by Van der *et al*. and Matsumoto demonstrated the efficacy of etoricoxib 90 mg in rheumatoid arthritis (RA) and ankylosing spondylitis (AS) patients [25, 26]. Etoricoxib significantly reduced the signs and symptoms of chronic LBP that were first noticed after one week, confirmed after four weeks, and sustained for three months [9].

In addition to its effectiveness in pain management, the majority of the current survey participants reported fewer gastric side effects as the added benefit of etoricoxib treatment. Clinical research has demonstrated that selective COX-2 inhibitors are just as effective as conventional NSAIDs in treating arthritis and pain, with the significant advantage of reduced GI toxicity [27]. Leung *et al*. observed that etoricoxib 60 mg treatment was associated with a lower occurrence of GI adverse events (such as abdominal pain and dyspepsia) and fewer upper GI perforations, ulcers, or bleeding (PUBs) compared to naproxen 500 mg in a 12-week study involving 501 patients with OA [14]. The EDGE trial reported improved GI tolerability of etoricoxib compared to diclofenac in patients with OA [24]. Etoricoxib 120 mg was connected to a lower cumulative incidence of gastroduodenal ulcers (≥3 mm) and a smaller increase in gastroduodenal erosions than naproxen 500 mg, as indicated by the findings of two significant 12-week endoscopic investigations conducted with patients having OA or RA [28]. According to a study of 5441 individuals with OA, RA, or AS from 10 clinical trial studies etoricoxib 60 to 120 mg was associated with reduced incidence of PUBs when compared to standard NSAIDs (Ibuprofen 800 mg, diclofenac 50 mg, and naproxen 500 mg).

The current survey offers valuable insights into pain management within an Indian context. Using a well-designed questionnaire and gathering responses from experts who based their opinions on evidence-based practices are the major strengths of the study. These findings hold significant importance in guiding informed decisions regarding optimal pain management strategies, which ultimately contribute to enhanced patient outcomes. However, it is essential to acknowledge the study's limitations. The relatively small sample size may restrict the generalization of the results. With a larger and more diverse sample, the findings could potentially offer a more comprehensive representation of the overall population of patients experiencing pain. Furthermore, the reliance on expert judgments increases the susceptibility to bias, as individual perspectives and preferences might have influenced the reported conclusions. It is crucial to consider these limitations when interpreting the study results and to undertake further research that validates and expands upon these findings.

Conclusion

Gastritis and GI discomfort are the most commonly reported adverse effects of NSAIDs. Most clinicians indicated that topical treatments are effective for managing acute pain, with diclofenac being a preferred NSAID for topical pain relief. According to expert consensus, the combination of etoricoxib and thiocolchicoside is recommended as a combination of NSAIDs and muscle relaxants. Experts endorsed a one-month regimen of 90 mg of etoricoxib for effective pain management. Etoricoxib emerges as an efficient pain management option, particularly for LBP and OA, due to its robust analgesic effect and diminished gastric side effects.

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Conflict of Interest
Not available

Financial Support
Not available

References

1. Qiu Y, Li H, Yang Z, Liu Q, Wang K, Li R, *et al*. The prevalence and economic burden of pain on middle-aged and elderly Chinese people: results from the China health and retirement longitudinal study. BMC Health Services Research. 2020 Jul 1;20(1):600.
2. Mills SEE, Nicolson KP, Smith BH. Chronic pain: a review of its epidemiology and associated factors in population-based studies. Br J Anaesth. 2019 Aug;123(2):e273-83.
3. Rheumatology TL. The global epidemic of low back pain. The Lancet Rheumatology. 2023 Jun 1;5(6):e305.
4. Mohanty SK, Ambade M, Upadhyay AK, Mishra RS, Pedgaonkar SP, Kampfen F, *et al*. Prevalence of pain and its treatment among older adults in India: a nationally representative population-based study. Pain. 2023 Feb 1;164(2):336-48.
5. Cazacu I, Mogosan C, Loghin F. Safety issues of current analgesics: An update. Clujul Med. 2015;88(2):128-36.
6. Cashman JN. The Mechanisms of Action of NSAIDs in Analgesia. Drugs. 1996 Nov 1;52(5):13-23.
7. Huang WN, Tso TK. Etoricoxib improves osteoarthritis pain relief, joint function, and quality of life in the extreme elderly. Bosn J Basic Med Sci. 2018 Feb;18(1):87-94.
8. Clarke R, Derry S, Moore RA. Single dose oral etoricoxib for acute postoperative pain in adults. Cochrane Database of Systematic Reviews [Internet]. 2012 [cited 2023 Aug 19];(4). Available from: https://www.cochranelibrary.com/cdsr/doi/10.1002/14651858.CD004309.pub3/abstract
9. Pallay RM, Seger W, Adler JL, Ettlinger RE, Quaidoo EA, Lipetz R, *et al*. Etoricoxib reduced pain and disability and improved quality of life in patients with chronic low back pain: a 3 month, randomized, controlled trial. Scand J Rheumatol. 2004;33(4):257-66.
10. Zerbini C, Ozturk ZE, Grifka J, Maini M, Nilganuwong S, Morales R, *et al*. Efficacy of etoricoxib 60 mg/day and diclofenac 150 mg/day in reduction of pain and disability in patients with chronic low back pain: results of a 4-week, multinational, randomized, double-blind study. Curr Med Res Opin. 2005 Dec;21(12):2037-49.
11. Birbara CA, Puopolo AD, Munoz DR, Sheldon EA, Mangione A, Bohidar NR, *et al*. Treatment of chronic low back pain with etoricoxib, a new cyclo-oxygenase-2 selective inhibitor: Improvement in pain and disability--a randomized, placebo-controlled, 3-month trial. J Pain. 2003 Aug;4(6):307-15.
12. Puopolo A, Boice JA, Fidelholtz JL, Littlejohn TW, Miranda P, Berrocal A, *et al*. A randomized placebo-controlled trial comparing the efficacy of etoricoxib 30 mg and ibuprofen 2400 mg for the treatment of patients with osteoarthritis. Osteoarthritis Cartilage. 2007 Dec;15(12):1348-56.
13. Lin HY, Cheng TT, Wang JH, Lee CS, Chen MH, Lei V, *et al*. Etoricoxib improves pain, function and quality of life: results of a real-world effectiveness trial. Int J Rheum Dis. 2010 May;13(2):144-50.
14. Leung AT, Malmstrom K, Gallacher AE, Sarembock B, Poor G, Beaulieu A, *et al*. Efficacy and tolerability profile of etoricoxib in patients with osteoarthritis: A randomized, double-blind, placebo and active-comparator controlled 12-week efficacy trial. Curr Med Res Opin. 2002;18(2):49-58.
15. Gottesdiener K, Schnitzer T, Fisher C, Bockow B, Markenson J, Ko A, *et al*. Results of a randomized, dose-ranging trial of etoricoxib in patients with osteoarthritis. Rheumatology (Oxford). 2002 Sep;41(9):1052-61.
16. Wiesenhutter CW, Boice JA, Ko A, Sheldon EA, Murphy FT, Wittmer BA, *et al*. Evaluation of the comparative efficacy of etoricoxib and ibuprofen for treatment of patients with osteoarthritis: A randomized, double-blind, placebo-controlled trial. Mayo Clin Proc. 2005 Apr;80(4):470-9.
17. Bingham CO, Sebba AI, Rubin BR, Ruoff GE, Kremer J, Bird S, *et al*. Efficacy and safety of etoricoxib 30 mg and celecoxib 200 mg in the treatment of osteoarthritis in two identically designed, randomized, placebo-controlled, non-inferiority studies. Rheumatology (Oxford). 2007 Mar;46(3):496-507.
18. Jagannathan H, Thota A, B. Kumarappa AK, Kishore G. A comparative study of aceclofenac versus etoricoxib in the management of acute low back pain in a tertiary care hospital. Journal of Drug Assessment. 2020 Jan 1;9(1):60-5.
19. Tai FWD, McAlindon ME. Non-steroidal anti-inflammatory drugs and the gastrointestinal tract. Clin Med (Lond). 2021 Mar;21(2):131-4.
20. Huang JQ, Sridhar S, Hunt RH. Role of Helicobacter pylori infection and non-steroidal anti-inflammatory drugs in peptic-ulcer disease: a meta-analysis. Lancet. 2002 Jan 5;359(9300):14-22.
21. Ofman JJ, MacLean CH, Straus WL, Morton SC, Berger ML, Roth EA, *et al*. A metaanalysis of severe upper gastrointestinal complications of nonsteroidal antiinflammatory drugs. J Rheumatol. 2002 Apr;29(4):804-12.
22. S P, J M, K G. A Comparative Study of Efficacy and Tolerability of Fixed-Dose Combination of Etoricoxib and Thiocolchicoside versus Thiocolchicoside alone in Patients with Painful Muscle Spasms. Biomedical and Pharmacology Journal. 2022 Mar 31;15(1):353-61.
23. Curtis SP, Bockow B, Fisher C, Olaleye J, Compton A, Ko AT, *et al*. Etoricoxib in the treatment of osteoarthritis over 52-weeks: a double-blind, active-comparator controlled trial [NCT00242489]. BMC Musculoskelet Disord. 2005 Dec 1;6:58.
24. Baraf HSB, Fuentealba C, Greenwald M, Brzezicki J, O'Brien K, Soffer B, *et al*. Gastrointestinal side effects of etoricoxib in patients with osteoarthritis: results of the Etoricoxib versus Diclofenac Sodium Gastrointestinal Tolerability and Effectiveness (EDGE) trial. J Rheumatol. 2007 Feb;34(2):408-20.
25. Van der Heijde D, Baraf HSB, Ramos-Remus C, Calin A, Weaver AL, Schiff M, *et al*. Evaluation of the efficacy of etoricoxib in ankylosing spondylitis: results of a fifty-two-week, randomized, controlled study. Arthritis Rheum. 2005 Apr;52(4):1205-15.

26. Matsumoto AK, Melian A, Mandel DR, McIlwain HH, Borenstein D, Zhao PL, *et al*. A randomized, controlled, clinical trial of etoricoxib in the treatment of rheumatoid arthritis. J Rheumatol. 2002 Aug;29(8):1623-30.
27. Warner TD, Mitchell JA. Cyclooxygenases: new forms, new inhibitors, and lessons from the clinic. FASEB J. 2004 May;18(7):790-804.
28. Hunt RH, Harper S, Callegari P, Yu C, Quan H, Evans J, *et al*. Complementary studies of the gastrointestinal safety of the cyclo-oxygenase-2-selective inhibitor etoricoxib. Aliment Pharmacol Ther. 2003 Jan;17(2):201-10.
29. Ramey DR, Watson DJ, Yu C, Bolognese JA, Curtis SP, Reicin AS. The incidence of upper gastrointestinal adverse events in clinical trials of etoricoxib vs. non-selective NSAIDs: an updated combined analysis. Curr Med Res Opin. 2005 May;21(5):715-22.

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