Practical Pearls About Current Rheumatic Medications

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KEYWORDS

• Rheumatic disease • Medications • Pearls and pitfalls

KEY POINTS

- Although commonly used for a variety of musculoskeletal conditions and rheumatic disease, nonsteroidal anti-inflammatory drugs pose cardiac and gastrointestinal risk in both acute and chronic use, necessitating patient education on appropriate use.
- Tuberculosis and viral hepatitis screening, routine vaccinations, and routine laboratory test monitoring are recommended in patients receiving disease-modifying antirheumatic drugs, antimetabolite medications, and biologic agents.
- At the discretion of the surgeon, disease-modifying antirheumatic drugs can be continued perioperatively; however, biologic agents should be held for at least one cycle before surgery.
- Nonsteroidal anti-inflammatory drugs, corticosteroids, hydroxychloroquine, azathioprine, and tumor necrosis factor-α inhibitors have been deemed appropriate for use in pregnancy. The remaining disease-modifying antirheumatic drugs, antimetabolites, and biologic agents are not safe during pregnancy or lactation.

INTRODUCTION

Primary care physicians provide an integral role in the evaluation and management of patients with rheumatic and musculoskeletal diseases. In the United States alone, more than 21% of adults have some form of arthritis.[1] Osteoarthritis affects over 27

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million adults with projections indicating that number growing over the next 25 years.[2] Meanwhile, nearly 1% of the adult population has rheumatoid arthritis (RA) and between 0.3% and 1.3% of adults are afflicted by a seronegative spondyloarthropathy.[1] Primary care providers are likely to encounter patients on a daily basis with a rheumatic disease.

Primary care providers need to be aware of the characteristics and potential issues surrounding the growing number of medications used in rheumatology. For example, 3.8 million combined prescriptions for adalimumab and etanercept were provided between April 2014 and March 2015, placing both of those medications in the top 75 most commonly prescribed medications in the United States.[3] Such medications are not benign, and physicians need to be aware of the properties of these medications even if they are not the one prescribing them. The intent of this article is to provide a broad review of the pharmacotherapy used in musculoskeletal and rheumatic conditions. Understanding drug indications, dosing, drug interactions, adverse effects, and use in special circumstances will allow the primary provider to better counsel and care for their patients with rheumatic conditions.

NONSTEROIDAL ANTI-INFLAMMATORY DRUGS

Nonsteroidal anti-inflammatory drugs (NSAIDs) provide an analgesic effect through the inhibition of cyclooxygenase-1 and cyclooxygenase-2, thereby preventing formation of prostaglandin and thromboxane. Hyperemia, pyrexia, increased vascular permeability, and hyperalgesia are reduced, thereby decreasing inflammation.[4] **Table 1** lists commonly prescribed NSAIDs available in the United States.

The American College of Rheumatology (ACR) specifically endorses NSAID use in the treatment of hand, hip, and knee osteoarthritis, axial spondyloarthritis, and peripheral manifestations of the spondyloarthropathies, such as enthesitis and dactylitis.[5–8] Individually, naproxen, indomethacin, and sulindac are recommended in the acute treatment of gouty arthritis and calcium pyrophosphate dehydrogenase arthropathy.[9,10] Low-dose NSAIDs are also recommended for prophylactic therapy when initiating urate-lowering therapy (ULT) for gout.[9]

Chronic NSAID use confers multiple risks. The gastrointestinal side effects can range from mild dyspepsia to life-threatening bleeding from gastric or intestinal ulcerations.[11] Use of cyclooxygenase-2 selective agents and coadministration of proton pump inhibitors reduce the risk of gastrointestinal toxicity.[12,13] Cardiovascular events,

Table 1
Nonsteroidal anti-inflammatory drugs

Medication	Dose (mg)	Dosing Frequency	Maximum Daily Dose (mg)
Ibuprofen	200–800	q6–8h	3200
Ketoprofen	25–75	q6–8h	300
Diclofenac	25–50	q6–12h	150
Indomethacin	25–75	q8–12h	150
Sulindac	150–200	q12h	400
Naproxen	250–500	q12h	1250
Celecoxib	100–200	q12–24h	400
Nabumetone	500–1000	q12–24h	2000
Piroxicam	10–20	Daily	20
Meloxicam	7.5–15	Daily	15