Osteoarthritis: Disease Burden and Unmet Patient Needs

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Osteoarthritis: Disease Burden

- Most common musculoskeletal disease in USA
- Prevalence of symptomatic osteoarthritis
  - 12.1% of general population
  - >21,000,000 patients[1]
  - Projected increase with aging population
- Decrease in function and Quality of Life[2]

1. Lawrence et al. Estimates of the prevalence of arthritis and selected musculoskeletal disorders in the United States. *Arthritis and Rheumatism* 1998; 41:778-799.
2. Spranger et al. Which chronic conditions are associated with better or poorer quality of life. *Journal of Clinical Epidemiology*. 2000; 53:895-907.

Treatments Options
ACR Osteoarthritis Guidelines[1]

- Non pharmacologic – Large range of options each with small-moderate benefit
- Pharmacologic
  - Acetaminophen
  - Nonselective NSAID with or without misoprostol or a proton pump inhibitor
  - COX-2 selective inhibitor
  - Nonacetylated salicylates
  - Pure analgesics – tramadol, opioids
  - Intraarticular injections
  - Topical Agents – Capsaicin, Methylsalicylate
- No universally effective pharmacologic therapy
- Benefit risk ratio varies with each option

1. American College of Rheumatology subcommittee on osteoarthritis guidelines. Recommendations for the Medical Management of Osteoarthritis of the Hip and Knee. Arthritis and Rheumatism 2000; 43: 1905-1915.

Considerations for Choice of Pharmacologic Treatment

- Evidence-based Medicine: Individualized selection of treatments based on benefit/risk assessment by physician and patient.
- NSAIDs and COX-2 selective inhibitors have greater efficacy, and toxicity, than acetaminophen[1,2]
- Only 27% - 42% of patients at risk of upper GI complications receive gastroprotective therapy[3,4]
- Failed adherence to gastroprotective therapy is a serious problem in preventing GI complications.

1. Pincus T et al. A randomized, double-blind, crossover clinical trial of diclofenac plus misoprostol versus acetaminophen in patients with osteoarthritis of the hip or knee. *Arthritis Rheum*. 2001; 44:1587-98.
2. Towheed T et al. Acetaminophen for osteoarthritis. Cochrane Database of Systematic Reviews 2006.
3. Abraham et al. National Adherence to Evidence-based guidelines for the prescription nonsteroidal anti-inflammatory drugs. *Gastroenterology* 2005; 129:1171=1178.
4. Goldstein et al. Impact of Adherence to concomitant gastroprotective therapy on nonsteroidal-related Gastroduodenal Ulcer Complications. *Clin Gastroenterol Hepatol* 2006 Nov; 4(11); 1337-45

Unmet Needs with Current OA Treatments

- High levels of dissatisfaction with current therapy[1]
  - 73% of general practitioners
  - 63% of patients
- Trials with multiple agents often required
  - 53% of OA patients switch to a second NSAID within first 2 months[2]
    - Most common reason (33%) = Lack of efficacy
    - Second most common (13%) = Adverse events
  - Switching less common with selective COX-2 inhibitors [3,4]
- Critical need for additional OA treatments

1 Crichton et al. GP and patient perspectives on treatment with non-steroidal anti-inflammatory drugs for the treatment of pain in osteoarthritis. *Current Med Res Opinion* 2002; 18:92-96

2 Walker et al. Patterns of interchange in the dispensing of non-steroidal anti-inflammatory drugs. *Journal of Clinical Epidemiology* 1992; 45:187-195.

3. Rhame et al. Therapy switching and associated costs in elderly patients receiving COX-2 selective inhibitors or non-selective non-steroidal anti-inflammatory drugs in Quebec, Canada. *Rheumatology* (Oxford). 2006 45(7):903-10.

4. Zhao et al. Drug switching patterns among patients with rheumatoid arthritis and osteoarthritis. *Pharmacoepidemiol Drug Saf*. 2004 May;13(5):277-87.

Conclusions

- OA is a common, serious and disabling disease that is a growing problem.
- While current therapy provides some relief to OA patients, significant dissatisfaction persists.
- The addition of new agents, even with similar mechanisms of action, has the potential to provide additional relief for many OA patients.