practical import is that, if another intervention allows pain to be relieved and therefore morphine to be discontinued, it is important to reduce the dose in a stepwise fashion, analogous to that employed for corticosteroid withdrawal to avoid problems with withdrawal syndrome. Even if withdrawal syndrome occurs from oral opiates, it is generally mild and not of the type seen in the addict population.

DECLAN WALSH, MB, BCh, MSc
Department of Hematology and Medical Oncolog
The Cleveland Clinic Foundation

ACUTE SINUSITIS: IMPACT AND MANAGEMENT

Sinusitis recently surpassed arthritis as the nation's most prevalent chronic disease: 31 million Americans are currently afflicted, according to the Center for Disease Statistics. While the vast majority of sinusitis cases are self-limiting, the disease has a large impact on the nation's health care bill. Sinusitis was the reason for 16 million doctor visits in 1989, 90% of which were to primary care physicians. In fact, 33% to 50% of all visits to primary care physicians are for upper respiratory infections and their sequelae, and 0.5% to 5% of these are associated with sinusitis. Further, $150 million is spent on cold remedies annually, and the amount seems to be growing. Antihistamine purchases, which account for $100 million of the total, increased by 26% from 1988 to 1989.

Acute sinusitis, which can affect any of the sinuses (frontal, maxillary, ethmoidal, or sphenoidal), usually originates from an upper respiratory infection by Streptococcus or Hemophilus organisms. Therefore, the recommended management should include application of antibiotics, topical and systemic decongestants, and mucolytic agents. The antibiotic of choice is amoxicillin, given in doses of 500 mg three times daily for 14 to 21 days. Topical decongestants should be used for

References: 1. McEvoy GK, ed. Drug Information '88. *Am J Hosp Pharm.* 1988:2039-2040. **2.** *Goodman and Gilman's The Pharmacological Basis of Therapeutics.* 7th ed. New York: Macmillan Publishing Co; 1985:312.

periods of not more than 5 days due to possible rebound effects. Contrary to popular belief, antihistamines should be avoided as they tend to thicken secretions, thus increasing blockage and inhibiting drainage.

HOWARD L. LEVINE, MD
Director of the Nasal/Sinus Center
Chief, Section of Nasal and Sinus Surgery
Mount Sinai Medical Center, Cleveland

OSTEOPOROSIS: WHEN TO USE CALCITONIN

Calcitonin is the treatment of choice for specific groups of osteoporotic patients. Because of its unique analgesic effect, calcitonin is recommended for patients who have significant pain that cannot be controlled by other methods. Calcitonin has also been shown to be beneficial in patients with steroid-induced osteoporosis. In studies monitoring patients during a 6-month period of steroid treatment, salmon calcitonin injections were found to prevent bone resorption.

Prior to beginning calcitonin treatment, tolerance testing should be conducted to eliminate the risk for allergic reactions. The typical management plan calls for the injection of 50 to 100 units daily or every other day. When used as an analgesic, the injections should be administered for a 2-week trial period, after which, if no improvement is apparent, treatment should be discontinued. If a favorable response is noted within 2 weeks, treatment should be continued for several more weeks, then reduced to three times per week and gradually discontinued over the next few months. At that point, the pain has often been effectively controlled; if not, it is sometimes necessary to resume the drug regimen. When used to treat osteoporosis, treatment should be conducted for at least 2 or 3 years. No trial period is necessary since the drug's efficacy for this purpose may not be readily apparent. Assessing bone mineral density is the best monitor of efficacy.

No significant toxicity associated with long-term use of calcitonin has been reported since the agent was first introduced 20 years ago. Unlike other analgesics, the drug does not induce central nervous system reactions. Nausea is the only commonly experienced side effect. Antiemetics counteract the effect. An intranasal form of calcitonin currently under investigation appears to produce an even lower incidence of side effects.

ANGELO A. LICATA, MD, PhD
Department of Endocrinology
The Cleveland Clinic Foundation