In contrast, sodium fluoride, an agent that has yet to be approved for treatment of osteoporosis, induces a linear increase in bone formation and skeletal density that is noted even up to 4 years.[10] It is hoped that etidronate can produce a linear increase in density over time without the toxic effects that fluoride may produce.

Although etidronate has been used to treat established osteoporosis, it may have greater application in the prevention of early menopausal bone loss and development of osteoporosis. With the high rates of bone turnover in early menopause following the loss of estrogenic activity, osteoclastic activity is increased. An agent that suppresses this enhanced osteoclastic activity, such as etidronate, calcitonin, or estrogen, will prevent skeletal deterioration.

Long-term use of etidronate or any diphosphonate must be evaluated carefully. The complications of long-term estrogen therapy are well known. Extended use of calcitonin may incur an element of tachyphylaxis and loss of efficacy. Long-term use of diphosphonates could bring unexpected complications, although this may be quite unlikely with low doses. Among the patients who underwent skeletal biopsies in the recent trials, there was no evidence of toxicity.

The regimen for etidronate therapy is simple. The patient takes 400 mg/d etidronate disodium for 14 days every 3 months. Because of low absorption, the drug must be taken on an empty stomach and no food should be consumed for several hours thereafter. Pre- and post-treatment bone density measurements are used to assess efficacy. The drug is not yet approved by the Food and Drug Administration for treatment of osteoporosis. As noted, long-term toxicity is unknown but short-term skeletal toxicity is not a problem. With minimal gastrointestinal side effects, the drug is highly acceptable to patients.

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Erratum

There were errors in the article, "Quality assessment in the medical intensive care unit: evolution of a data model," by Edward D. Sivak, MD, and Alejandro Perez-Trepichio, published in the May 1990 issue, Volume 57, Number 3. In Table 2, page 276, the median age of patients on the gastroenterology service was 60.8 years. The age range of survivors on the thoracic cardiovascular surgery service was 15 to 79 years, and the age range of nonsurvivors was 52 to 69 years. The median number of pre-ICU days for nonsurvivors on the thoracic cardiovascular surgery service was 66.