Intestinal absorption of calcium gluconate and oseine-mineral complex: an evaluation by conventional analyses
[Article in French]

Buclin T, Jacquet AF, Burckhardt P.

Calcium (Ca) preparations are widely used in the treatment of osteoporosis, usually as soluble salts. Tolerance might be improved by prescription of slowly dissolved Ca preparations, since Ca is also absorbed distally, even in the colon. In this regard the use of natural forms of Ca might be advantageous, but natural products cannot be labeled reliably for easy evaluation of their absorption. To study the intestinal absorption of an osseino-mineral complex (Ossopan) in comparison with Ca-gluconate, healthy males were investigated by means of conventional blood and urinary measurements before and after ingestion of either substance containing 1.58 g Ca. All subjects were placed on a standard diet 2 days before and during test day. Ca-gluconate (n = 7) evoked a marked and transient rise in plasma ionized calcium; total plasma calcium and urinary calcium followed a parallel course, while plasma and urinary phosphate decreased. After administration of osseino-mineral complex (n = 6), a slow but sustained elevation of plasma ionized calcium was observed while total calcium remained unchanged when corrected by the plasma proteins. Plasma phosphate and proteins increased, as did urinary phosphate. Comparing the 24-hour urine of the test day with that of the previous day, the rise in calcium excretion was slightly greater in the subjects treated by osseino-mineral complex than in those who were given Ca-gluconate, while phosphate excretion increased in the first group and decreased in the second. It is concluded that the bioavailability of Ca in osseino-mineral complex is as good as, if not better than, that of Ca-gluconate.(ABSTRACT TRUNCATED AT 250 WORDS)