INTRODUCTION

SOME BIOCHEMICAL MARKERS OF BONE TURN OVER IN PATIENTS WITH EARLY OSTEOPOROSIS

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Measurement of the urinary excretion of the hydroxy pyridinium crosslinks of collagen, pyridinoline (pyrilinks, pyd) and deoxypyridinoline (pyrilinks-D,Dpd) may provide indices of bone resorption. These crosslinks reflect the degradation of mature collagen and not of any intermediate components. Pyrilinks-D (Dpd) is derived only from bone collagen but pyrilinks (Pyd) is also derived from collagen in a number of other tissues but not skin. For normal individuals values for Pyd are highly correlated with those for Dpd suggesting that bone is the major source of both crosslinks in urine ***(Robins et al., 1991).***

It is has been shown that the urinary excretions of both pyd and Dpd are significantly elevated in patients with disorders characterized by high rates of bone turnover ***(Robins et al., 1990).***

Excretion of the crosslinks was significantly higher ($P<0.01$ for Pyd, $p<0.001$ for Dpd) in patients with vertebral fractures (type I osteoporosis) than in age – matched controls ***(Mole et al., 1992)***.

In ***1998 Ross and knowlton*** reported that urinary creatinine-corrected free deoxypyridinoline (Pyrilinks- D, Dpd) and free pyridinolines (pyrilinks, Pyd) (the markers of bone resorption), are associated with rapid bone loss. This relationship appears to be continuous with progressively greater risk of rapid bone loss with increasing levels of biomarkers.