Leptin in patients with chronic renal fallure on hemodialysis

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Leptin is a 16 kilo dalton protein that is encoded by the OB gene (Zhang et at, 1994) and secreted by adipocytes (Considine et a.1, 1996).In humans, leptin circulates in the blood with about 50% in the free form and the remainder attached to binding proteins (StenvinkeL 1998). It crosses the blood brain barrier by a saturable transport mechanism (Banks et at, 1996), binds to its receptor in the hypothalamus (Lee et aL, 1996) and exerts its actions by restraining the synthesis and release of neuropeptide Y from hypothalamic nuclei ultimately causing anorexia (Schwartz et al. 1995) (Stephens et aL, 1995), stimulating the miogenesis (Susulic et at, 1996) and increasing metabolism (StenvinkeL 1998).Leptin is primarily cleared from the circulation by the kidney (Cumin et aL, 1996).Protein calorie malnutrition is a common problem in patients with chronic renal failure either on conservative treatment (Kaufmann et al.„ 1994) or on regular haemodialysis (Kopple, 1994) (Kumar et a., 1994). The primary cause for this malnutrition is thought to be anorexia (Bergstrom et a., 1995).The aim of this work is to study the serum leptin concentration in patients with chronic renal failure and to evaluate its possible association with anorexia and its possible value for assessment of nutritional status in these patients.