HORMONE REPLACEMENT THERAPY LOWERS LIVER ENZYMES IN DIABETIC PATIENTS


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Background: Increasingly strong links are being recognized between diabetes, insulin resistance and liver fat accumulation e.g. nonalcoholic fatty liver disease (NAFLD). Recent data indicating that hormone replacement therapy (HRT) may lessen diabetes risk is intriguing but explanatory mechanisms are unclear.

Objective: Post hoc investigation of the possibility that HRT may favourably influence liver enzyme levels commonly elevated in patients with diabetes. We examined liver function test data from a 6-month trial of a low-dose continuous combined HRT (1 mg 17β oestradiol and 0.5 mg norethisterone acetate).


Results: Forty-five women completed the study with 19/22 in the active group demonstrating compliance as measured by sex hormone changes. Relative to placebo recipients (n = 23), women randomized and compliant to HRT demonstrated significant reductions in ALT -14 (-23 to -6) U/l, P = 0.002, AST -9.2 (-14 to -5) U/l, P &lt; 0.001 and ALP -60.8 (-80 to -42) U/l, P &lt; 0.001. Circulating concentrations in GGT were also significantly reduced (P = 0.035). All changes were significant using an intention-to-treat analysis.

Conclusion: HRT containing low-dose estradiol and norethisterone reduces serum concentrations of liver function enzymes, potentially due to a lowering of liver fat accumulation. Better understanding of mechanisms by which this HRT improves liver function tests could help the design of new therapies to treat individuals with NAFLD. © 2006 Blackwell Publishing Ltd.