

REDUCED PLASMA TESTOSTERONE FOLLOWING SPIROLACTONE IN MAN

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In the male intravenous administration of spiro lactone (canrenone-potassium) causes a rapid and marked decrease of the plasma testosterone concentration without any simultaneous change of plasma androstenedione (Dymling, Nilsson & Hökfelt, Acta endocr. 70/1972/104). In principle, this effect of spiro lactone could be brought about via an effect on the pituitary, the testicles, testosterone protein binding or the metabolism of testosterone. So far, the underlying mechanism has not been clarified. The following experiments were performed to obtain further information in this respect.

Plasma FSH and LH concentrations were studied before and after intravenous injection of spiro lactone in 3 menopausal and 1 fertile woman, 1 normal male, 1 male with Addison's disease and one with hypogonadism. There was no change in LH in any of the patients. FSH remained unaltered in the females but tended to increase in the males.

Two males, one suffering from primary hypogonadism and one from panhypopituitarism, under chronic treatment with testosterone were studied 2-4 days after their monthly intramuscular injection of 250 mg of a depot-preparation of testosterone-propionate. In both patients the plasma concentration of testosterone decreased rapidly following the intravenous injection of spiro lactone, without any simultaneous change in plasma androstenedione.

The reported experiments are interpreted to demonstrate, that spiro lactone causes a rapid change in the metabolic clearance of testosterone without simultaneous conversion to androstenedione.