L53IMPACT OF HYPOGONADISM ON BONE MIN. DENSITY IN PATIENTS WITH SECONDARY HYPERPARATHYROIDISM (ESRD)

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IMPACT OF HYPOGONADISM ON BONE MINERAL DENSITY IN PATIENTS WITH SECONDARY HYPERPARATHYROIDISM (ESRD)

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Key words: *DXA, ESRD PATIENTS hypogonadism, Hyperparathyroidism*

Backround: Hypogonadism is associated with low bone mass, in men and women. ESRD is associated with a lot of hormonal effects on the hypothalamic-hypophisis-gonadic axes. We studied the relationship between hypogonadism and BMD, bone turnover and bone loss in patients with ESRD.

Methods Material: The study group comprised patients, diagnosed with secondary hyperparathyroidism, form all of the chronic hemodialised patients treated in the Haemodialysis and Renal Transplantation Center form the County Hospital nr.1. We diagnosed secondary hyperparathyroidism by means of repeated iPTH values (> 3xUNL), increased bone turnover markers. We also measured LH,FSH,PRL, Total testosterone and

estradiol levels. Gynecological and urological evaluation were also done. BMD was meassured with DXA (anteroposterior technique, Delphi W device, Hologic Inc.).

Results: From the total of 66 (36 men, 30 women) cases with secondary hyperparathyroidism, with a mean age 44,32 years, beeing in the hemodialisis treatment for a perioad of 49,6 ± 43,72 months, 31 (46,9%) had hypononadism. 39% of men had secondary partial testosteron deficiency, 26,6% of the females had secondary amenoreea due to hyperprolactinemia and uremia, and 9 women were in natural menopause.

In the condition of unsignificant difference of age, hemodialisis lenght, BMI, there were significat difference regarding BMD as meassured by DXA in hypogonadal compared with eugonadal patients (spine: 0,811 ±0,117 g/cm2 versus 0,918 ± 0,154, T = -4,298, p = 0,00006, total hip: 0,720±0,13 versus 0,844±0,113, T = -4,101, p=0,00011). Fig 1 and 2. Sexual steroid deprivation, both in women and men, is associated with lower DMO. The difference is more important at lombar spine level.

The risc of having bone demineralisation is higher in hypogonadal patientsal spine level (OR =1,038) or osteoporosis (OR = 3,98) compared with hip level (osteopenia: OR = 1,3, osteoporosis OR= 1,904)

Conclusion: Physiological or secondary hypogonadism impaires BMD in patients with secondary hyperparathyroidism. The effect is independent of age of the subject, BMI, or lenghts of hemodialisis.