ISGE
GYNECOLOGICAL ENDOCRINOLOGY
THE 18TH WORLD CONGRESS
7-10 MARCH 2018 FLORENCE, ITALY

Bone mineral density in women with hyperprolactinaemia.

A Kostrzak (PL) [1], A Czyzyk (PL) [2], A Podfigurna (PL) [3], B Meczekelski (PL) [4]

Context :
Hyperprolactineamia is one of the most common endocrinological disturbances in women at the reproductive age. Women suffering from hyperprolactineamia present complex of variuos symptoms.
High level of prolactin (PRL) decreases the normal pulsatile secretion of GnRH impairing the pituitary production of LH and FSH which in turn cause hypoestrogenism.Hypoestrogenism is known etiological factor for decreased bone mineral density (BMD).
Objectives :
The study group was composed of 50 women (mean age 26+/-3 years, range:19-32 years) with hyperprolactinaemia
The control group was composed of 20 healthy women (mean age 26+/- 2 years , range 23-32 years) with the normal prolactin serum concentration.
Methods
Hyperprolactinaemia was diagnosed in every patient with the serum blood prolactin levels >30 ng/ml
Serum concentrations of PRL, FSH, LH, E2 , T, TSH,FT4 were measured.
We also measured the presence of macroprolactin by using polyethylene glycol precypitation test (PEG)
Bone mineral density (BMD) of the spine L1-L4 were measured by the dual X-ray absorptiometry (DXA) and all measurements were made by using the LUNAR DPX 100 densitometer (Lunar Cp.Madison, USA) with the accuracy rate determined at 0,5 %.The results were expressed in the Z-Score in absolute values (g/cm2)
Intervention: It was not interventional study.
Results :
In the group of women with hyperprolactinaemia we reported significantly low value of Z- score : ?0.76 ± 0.76 than in the control group ?0.13 ± 0.83 (p<0.0001)
We also observed higher prolactin serum concentration 66.7±28.2 ng/ml than in the control group 10.2±3.2 ng/ml (p <0,001)
We reported lower estradiol 50.4 +/- 36 pg/ml in relation to the control group. vs 280,1 +/- 15,5 pg/ml (p<0,001).
Conclusion :
These study suggested that decreased bone mineral density is associated with chronic hyperprolactinaemia as the consequence of hypoestrogenism.

[1] Pozna? University of Medical Sciences, [2] Pozna? University of Medical Sciences, [3] Pozna? University of Medical Sciences, [4] Pozna? University of Medical Sciences