Depression, Obesity, and Elbow Fracture: a Pathogenic Triangle?
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Introduction
Depression and associated medication, especially Selective Serotonin Reuptake Inhibitors, may associate high fracture risk through serotonin (but not only). Obesity has been recently proved to be correlated with a higher fracture risk for a few sites as ankle, elbow, shoulder, etc. Moreover, depression and some anti-depressants may increase the calories intake and consecutive increased of Body Mass Index (BMI) is registered.

Material & Methods
We present a fragility fracture medical history in a context of depression and obesity as only obvious causes of osteoporosis. The bone profile is analyzed in this case report.

Results
57-year old non-smoking female patient was diagnosed with multi-nodule goiter at age of 49 and total thyroidectomy was performed. Substitution with daily levothyroxine was continued up to present with consecutive normal TSH levels. Menstruation stopped at 50yrs; she suffered of chronic headache. At age of 53 she was diagnosed with depression and she was offered different types of anti-depressive medication for almost 3 years. At age of 56 she suffered a left elbow fracture and the circumstances of fall indicated an osteoporotic type.

Endocrine check-up was done at that moment. The patient had a BMI of 40 kg/sqm; 25-hydroxyvitamin D assay showed an inadequate level of 20.8ng/mL (N:30-100ng/mL), with normal bone turnover markers: blood CrossLaps of 0.44ng/mL (N:0.226-1.008 ng/mL), blood osteocalcin of 25.71ng/mL(N:15-46 ng/mL), and circulating serotonin of 280ng/mL(N:80-450 ng/mL). Dual-Energy X-Ray Absorptiometry showed lumbar L1-4 Bone Mineral Density (BMD) of 1.049g/sqcm, T-score=-1.1SD, Z-score=-1.4SD. Weekly oral risendronat with daily vitamin D/calcium supplements were followed for 1 year: BMD increased to 1.14g/sqcm, T-score=-0.3SD, Z-score=-0.5SD.

Conclusion
Obesity and depression might associate vitamin D deficiency. Depression and anti-depressants may act on fall risk by attention and gait anomalies. However, both conditions may be not associated relevant BMD changes.

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