

## FC03-05

### LOW BONE MINERAL DENSITY AND PSYCHOSIS: A MULTIFACTORIAL RELATION

R. Coentre, D. Barrocas, P. Levy

*Department of Psychiatry, Santa Maria Hospital/Faculty of Medicine, University of Lisbon, Lisbon, Portugal*

**Aims:** Low bone mineral density (BMD) is a major public health issue leading to fractures, pain and disability. The association between psychosis and low bone density has been suggested in the last years.

**Method:** The authors review the literature in Medline database using the words 'bone mineral density', 'psychosis', 'antipsychotic', 'schizophrenia', 'bipolar disorder' and 'psychiatry disorders'.

**Results:** Some studies show elevated prevalence of changes in BMD in patients with psychiatry disorders, namely psychosis. These changes are multifactorial, due to therapeutic factors and/or to the disorder *per se*. The low BMD induced by some antipsychotic drugs has been attributed mostly to hyperprolactinaemia and its consequences. Lithium, carbamazepine, sodium valproate and the use of thyroid-stimulating hormone-suppressive doses of L-thyroxin used in bipolar disorder also have a negative impact on bone health. Patients with psychosis could be vulnerable to bone abnormalities even without treatment, environmental factors like smoking, sedentary lifestyle, decreased exposure to sunlight, alcoholism, dietary deficiencies and polydipsia are partially responsible for that. Also genetic factors (vitamin D receptor gene, estrogen receptor gene etc.) and biological factors (gender, decreased of peak bone mass, abnormalities in immune-inflammatory mechanisms, hypercortisolemia stress-induced etc.) contribute to the abnormalities in bone dynamics in psychosis.

**Conclusion:** The association between low BMD and psychosis has been demonstrated in literature, understanding all the factors involved in this process will help the development of preventive and treatment strategies. A large study including first psychotic episode patients could be useful to distinguish between disorder and drug induced factors of low BMD in psychosis.