

## P02-233 - ACUTE PARANOID PSYCHOSIS DUE TO PAST CHRONIC MANGENESE EXPOSURE

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A male patient aged 49 was referred for evaluation of an acute paranoid psychotic state followed by an apathy syndrome. Since his history, apart from hypertension, did not mention any somatic complaints or psychiatric symptoms, and he had been involved in an adequate professional career as metalworker and welder, MRI- scanning of the brain was performed. There appeared to be bilateral hyperdensity of the globus pallidus, suggestive for chronic manganese (Mn) intoxication. Subsequently, a Mn plasma level of 31 nmol/l (range: 7-20nmol/l) that confirmed the diagnosis.

Mn is a trace element that regulates many enzymes and is essential for normal development and body function. Chronic Mn intoxication has an insidious and progressive course and usually starts with complaints of headache, fatigue, sleep disturbances, irritability and emotional instability. Later, several organ systems may be affected leading to increased heart rate and/or blood pressure, elevated total cholesterol levels, and lowered fertility in males. With respect to neurotoxicity, Mn primarily affects the globus pallidus and the striatum of the basal ganglia, and induces damage to the dopaminergic system. This may ultimately lead to dystonic movements and a parkinsonian syndrome that is dominated by generalized bradykinesia and rigidity.

As to neuropsychiatry, an array of symptoms may develop up to 30 years after intoxication of which gait and speech abnormalities, cognitive and motor slowing, mood changes and hallucinations are the most common. Psychotic phenomena are rarely reported.

In conclusion, subacute psychotic symptoms in the absence of a psychiatric history, may point towards rare occupational diseases.