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THE MALIGNANT NEUROLEPTIC SYNDROME: ETIOPATHOGENESIS, DIAGNOSIS AND CLINICS

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MNS is a rare, acute or chronic idiosyncratic reaction to a neuroleptic medication. The syndrome is characterised by fever, muscular rigidity, altered mental status and autonomic dysfunction. MNS is caused by neuroleptics, dopamine antagonistic medications, combination of MAO and antidepresants.
The main groups of theories, explaining MNS are reviewed. There is a genetic predisposition and association between MNS and human DRD2 gene A1 and A2 alleles polymorphism. There were attempts to prove MNS and serotoninergic syndrome as different forms of malignant hypertermia. Dopaminergic activity inhibition increases quantity of calcium in the sarcoplasmic reticulum, therefore muscular contraction increases and it leads to clinical MNS signs. There are theories of neuromediators interaction (changes in HVA, adrenaline, MHPG, 5-HIAA levels in cerebrospinal fluid detected during MNS), increased sympathetic activity, malignant hyperthermia, and direct toxic effect of neuroleptic medications to sceletal muscules in vitro.
The main risk factors and clinical signs of MNS are summarised. MNS develops suddenly during few hours from the start of treatment with neuroleptics, in rare cases - during first 4 weeks. Usually MNS starts during first 24-72 hours. Classic MNS signs are muscular rigidity („lead pipe“), hypertermia, elevation of CPK.
MNS diagnosis is determined based on anamnesis, clinical signs, laboratorical findings and differentiation which is based by excluding other pathological conditions.

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