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Reversible dementias- A clinical update

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The term dementia is of Latin origin and means "devoid of the mind." It is used to describe a persistent state of serious cognitive, functional and emotional deterioration from a previously higher level of functioning. The essential feature of dementia is the acquired and persistent compromise in multiple cognitive domains that is severe enough to interfere with everyday functioning. Memory is the most common cognitive ability lost with dementia; 10% of persons >70 years and 20–40% of individuals >85 years have clinically identifiable memory loss. The main cause of dementia is neurodegenerative diseases. Alzheimer's disease (AD) became the most common neurodegenerative disorder and one of the most common diseases of the aging population. Dementia is irreversible when caused by degenerative disease or major trauma, but might be reversible in some cases. The reported frequency of dementia due to potentially reversible causes varies from 0 to 23% and careful evaluation of persons referred for dementia evaluation can identify these treatable cases. Commonest among these causes are alcohol and drug related dementia, brain lesions such as normal pressure hydrocephalus , tumors and chronic subdural hematomas, metabolic disorders such as hypothyroidism, hypoparathyroidism, vitamin B12 deficiency and central nervous system (CNS) infections such as neurosyphilis and HIV. Patients with a reversible or potentially reversible disorder should be evaluated properly and should not be falsely diagnosed as untreatable, irreversible dementia disorder. Most reversible conditions are easily identified by a proper history taking, physical examination, psychiatric evaluation, brain imaging, and routine laboratory tests. Early detection and treatment of them can improve the quality of life of patients.

Evaluation of serum hepcidin concentrations in patients with obstructive sleep apnea

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Obstructive sleep apnea syndrome (OSA) is defined as a combination of symptoms as a result of intermittent, recurrent constraint and/or complete airway overhead/ airway overflow (sleep disturbance). In the case of reduced airflow through upper respiratory tract >90%, in the presence of thoracic and/or abdominal movements over a period >10 sec., it is about obstructive apnea. With a ≥30% reduced airflow over the upper respiratory tract over a period of 10 seconds, desaturation ≥3% followed by waking or desaturation >4%. During desaturation episodes, the organism is subjected to chronic stress. This leads to reduced nitric oxide secretion, increased release of interleukin-6, tumor necrosis factor-alpha and other pro-inflammatory cytokines. The described pathological cascades are associated with the development of insulin resistance, arterial hypertension, metabolic syndrome, systemic atherosclerosis and increased cardiovascular risk. Thirty five (35) patients with OSA were included; age 42.9±8.8. The established results were compared to sex and age matched healthy control and with patients with no atherosclerotic changes. Routine blood analyses as CBC, serum iron, ferritin, hsCRP and specific hepcidin, homocysteine and vitamin B12 were measured in the included groups. IMT and FMT were used for atherosclerotic changes evaluation. We found increased serum hepcidin levels in OSA patients with IMT and FMD changes (99.1±14.7 μg/L) compared to healthy controls (19.5±2.1 μg/L); $P<0.001$. A positive correlation was found in OSA patients with atherosclerotic changes between IMT and FMD to serum hepcidin levels ($r=0.809$, $r=0.877$, resp.; $P<0.01$). Serum hepcidin correlates positively to homocysteine in OSA patients with atherosclerotic evidence changes ($r=0.899$, $P<0.005$). Brain-vascular disease risk factors are connected to obstructive sleep apnea syndrome. Dysregulation of iron homeostasis is one of the main risk atherogenesis factors. Early hepcidin quantification might predict an atherosclerosis occurrence in OSA patients, which might be very important for better clinical diagnosis and practice