

INFLAMMATION AS COMMON DENOMINATOR OF ED AND MDD

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Introduction: Comorbidity between ED and depression is high. Causal relation between two is bidirectional. Person with ED can have MDD because of psychological factors. MDD symptoms and associated hypogonadism affect on libido and erectile function. Diseases like ankylosing spondylitis, asthma, rheumatoid arthritis, coronary heart disease, psoriasis, diabetes, and multiple sclerosis have strong co morbid ED and MDD. Inflammation is common overlapping factor in these illnesses.

Method: An internet search was made on pubmed, and psychiatrist.com, using key words, major depression, endothelial dysfunction, inflammation, erectile dysfunction, and cytokines. This was followed by study of relevant material in different journals and books.

Result: Men with ED had high levels of depressive, somatic, and anxious symptoms. Approximately one-third of people with MDD had higher levels of peripheral inflammatory marker. Incidences of ED are two fold higher in depressed people as compared with nondepressed.

Discussion: Levels of pro inflammatory cytokine like IL-1, IL-6, TNF, CRP, interferon-gamma and homocysteine are raised in MDD. Cytokines effect on the HPA axis, glucocorticoid resistance, neurotransmission and hippocampal neurogenesis. Patients treated with interferon have higher risk of developing MDD. Antidepressant therapy results in decreased inflammatory response.

Erectile function depends on integrity of endothelium which is target of inflammation. Endothelial dysfunction is linked to ED as they share a common pathway through the release of nitric oxide. Proinflammatory cytokines and homocysteine play role, both in ED and MDD.

Conclusion: Inflammation and its markers need to be considered in cases of co morbid ED and MDD.