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Silent inflammation in the jaw and neurological dysregulation - case study linking RANTES/CCL5 over expression in jawbone with chemokine receptors in the central nervous system**Johann Lechner***Clinic Integrative Dentistry Munich, Germany*

Introduction: The transition from acute local inflammation following wisdom tooth surgery to a chronic stage of "silent inflammation" could be a neglected cause of unexplained medical conditions.

Case report: Here we will refer to an unusual case of recurrent syncope in a 19-year-old woman whose 12 months of treatment in various clinics, and wide range of prescribed medications, failed to bring about any improvement in her condition.

Material and methods: As previous analyses of the cytokine profile in fatty-degenerative osteonecrosis of the jawbone (FDOJ) show local overexpression of the chemokine RANTES/CCL-5 (R/C), this case further supports the suspicion of a chronic inflammatory process.

Results: Stepwise surgical removal of FDOJ areas containing insufficiently healed, osteonecrotic medullary cavities resulted in the permanent cessation of syncope episodes by removing local sources of R/C.

Discussion: Following a study of the relevant literature on the effects of chemokines in the central nervous system (CNS), we focus here on the interconnected disease pathways of peripheral R/C overexpression and disorders of the CNS. A change in peripheral immune regulation in the jaw provokes a chronically aggressive immune response in the CNS. If both systems fail to resume normal functioning, this maladaptation results in a dire neurological response pattern in this young patient.

Conclusion: The incomplete wound healing and associated "silent inflammation" in the jawbone may contribute via peripheral, local R/C overexpression to various symptoms in the CNS which are typical of chemokines. From a systemic perspective, we recommend that more attention be paid to this cytokine cross-talk in medicine and dentistry.

Biography

Johann Lechner was trained at Dental University Munich, Germany. He has published 21 science based papers in PubMed indexed journals used by 150 thousand of dental and medical professionals worldwide (PubMed, getting over 40,000 hits) and 80+ articles. He has published ten books and presented 80+ education seminars in 8 countries (USA, UK, Italy, France, Austria, Switzerland, Romania, and China), and 14000+ attendants listened to his lectures. Dr. Lechner developed patented ultrasound sonography diagnostic tools for integrative dentistry (www.cavitaui.de). He had edited and published a book in English on Cavitational Osteonecrosis in Jawbone. In his research, he emphasizes clinical features of bone research, chronic inflammation and heavy metal load in the jawbone, and the systemic interference of such on chronic inflammation and their impact on our overall health..