

OVERLOAD OF THE GLYMPHATIC SYSTEM BY DENTAL PROBLEMS: EFFECTS ON THE BRAIN

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ABSTRACT

Until about 15 years ago, lymphatic drainage of the brain was unknown. Then the glymphatic system was discovered, which ensures the drainage of waste products and toxins to the lymphatic system of the head. We have asked ourselves what problems from the mouth can weaken or block this drainage. There are a number of toxin-producing processes in the mouth that overload the lymphatic system. The most important issue appears to be that of osteolysis of the jawbone (NICO, FDOK), which increases the cytokine Rantes, with enzyme inhibition in the organism and especially in the brain. Through adequate diagnostics and therapy, we were able to normalize many processes, e.g. in the brain.

INTRODUCTION

At present, we are experiencing increasingly frequent brain problems. These also have to do with coagulation disorders and reduced blood flow caused by Covid-19 viruses and their spike proteins. What is usually neglected are the problems caused by toxins in the mouth area and the resulting problems with the lymphatic drainage of the head in the context of stress on the glymphatic system.

The Glymphatic System

Until about 15 years ago, lymphatic drainage of the brain was unknown. The glymphatic system is a disposal system for waste products in the central nervous system of vertebrates, i.e. in the brain and spinal cord. The name is a neologism of the terms glia and lymphatic system and was introduced by a research group led by Maiken Nedergaard (Rochester and Copenhagen, 1, 2, 3, 4). Similar to the lymphatic system, which ends outside the meninges and does not occur in the central nervous system, the glymphatic system acts as a flowing circulation system for the removal of metabolic end products and toxins.

The Oral System

The oral system should be free of toxins so that the lymphatic system is not stressed by dentogenic toxins and the glymphatic system is not overloaded or even blocked. As a result of an overload, central nervous system toxins can no longer be adequately removed and accumulate in the brain. This problem

and this know-how are largely unknown. Dentists and doctors (e.g. neurologists) hardly work together in this regard.

Oral Toxins, which are important?

- A. Metals: i.e. heavy metals, in amalgam (mercury, silver etc) and dental gold (palladium, platinum etc); i.e. light metals in implants (titanium etc). They are all toxic, especially for the brain.
- B. Chronic bacterial inflammation of the gingiva and/or gums, especially hidden gangrenous stomatitis, pulpitis, and periapical granuloma findings. The starting point is often inadequate root canal treatment, in which dead tissue and germs remain in the root canals. According to insiders, around 80% of these treatments are insufficient. Periapical granuloma, also sometimes referred to as a radicular or apical granuloma, is an inflammation at the tip of a dead (nonvital) tooth, resulting in inflammation of granulation tissue at the root tips of a dead tooth.
- C. Jaw bone foci in the sense of non-infectious chronic osteitis : NICO, FDOK. Also, fatty degenerative jaw osteitis. Chronic softening of the jawbone is a phenomenon that is still not recognized by many areas of medicine and dentistry, or at least its health effects are not taken seriously. These «jaw inflammations» were described by the American pathologist Prof. Bouquet as «neuralgia inducing cavitation osteonecrosis». (5, 6, 7) NICO is a deficiency in the form of a metabolic disorder that leads to fatty degenerative bone dissolution. NICO usually presents as fatty lumps that are easily spooned out of the medullary canal of the jawbone. These degenerated fat cells in NICO areas produce inflammatory messengers (cytokines/chemokines like RANTES that affect other organs where they can be associated with breast cancer, Hashimoto's, multiple sclerosis, etc. (8, 9)
- D. Periodontitis and gum pockets filled with problematic pathogens. The tooth is anchored in the tooth socket by gomphosis, i.e. a tooth is only suspended in its bone socket via the Sharpey fibers and is not firmly fused to it. There is therefore a natural gap (= periodontal gap) between the tooth and the bone, in which the Sharpey fibers and periodontal ligament are located. Bacteria can penetrate this gap. Especially those that feel very comfortable in this environment (= obligate anaerobes) multiply and lead to inflammation in which the Sharpey fibers are damaged. The periodontium recedes and inflammatory niches, known as periodontal pockets, develop in the periodontal gap, which can repeatedly and acutely fill with pus.

NICO

Toxins are produced by bacterial colonization in the jawbone and are increasingly found in the NICO area. These processes cannot be visualized by usual X-ray. What effects do the toxins have? They can lead to a significant inhibition of vital enzymes in the cell and thus to mitochondriopathy, which is now considered by many researchers to be a key factor in the development of cancer. This makes the foci in the jawbone important for chronic diseases - although X-rays do not allow a reliable diagnosis to be made. This leads to the holistic conclusion that even if no dead/root-filled teeth are present, systemic sensitization of the immune system by mercaptans/thioethers from NICO areas should be investigated.

RANTES = CCL5 (fig. 1):

CCL5 (CC-chemokine ligand 5) is a cytokine from the CC chemokine family. Properties : CCL5 is involved in inflammatory processes. CCL5 is produced by cytotoxic T cells, among others, and binds T cells, monocytes and eosinophils by binding the receptors CCR3, and CCR1. CCL5 activates the GPCR GPR75. (10, 11, 12, 13, 14)

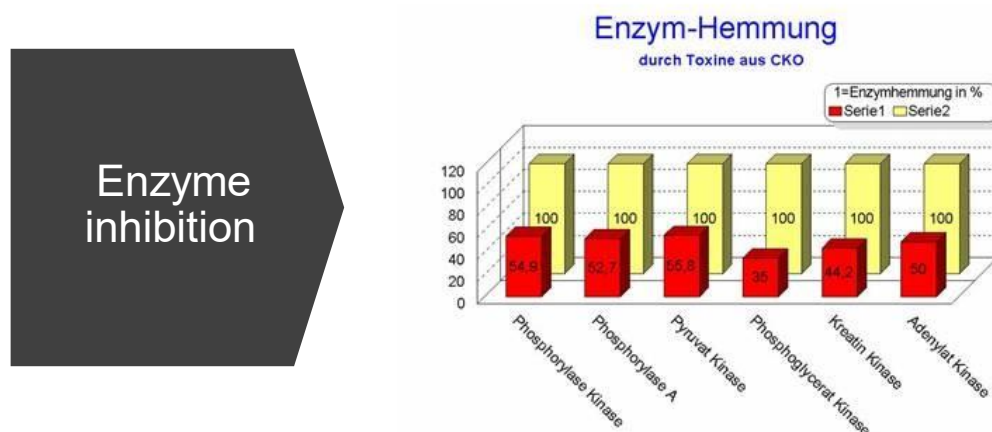


Figure 1 (The effects of RANTES: enzyme inhibition.)

Consequences

As a result of those disorders, the brain cannot detoxify itself sufficiently and accumulates toxins. Different brain diseases can be triggered depending on the individual's previous exposure. In the preliminary stages, there is the phenomenon of «brain fog» with symptoms such as dizziness, concentration problems and fatigue. Later dementia or Alzheimer's follow. (15, 16)

In case of a perforated blood-brain-barrier (by means of electro-smog) the metals can penetrate into the brain and accumulate in the glands of the brain. After intensive dental diagnostics with digital computer tomography and ultrasound (CaviTAU), we have regularly found dentogenic and jaw findings, and improvements in symptoms after treatment. The usual X-ray is insufficient. (17, 18)

These examinations should be carried out in all cases where there are unclear brain-related problems. However- as mentioned - also severe diseases far from the brain (like breast cancer) can be connected and react positively on the removal of the dental focus

CONCLUSIONS

The brain has a glymphatic system for detoxification, which drains the toxins into the lymphatic system of the head. This lymphatic system is stressed by toxin-producing processes in the mouth area to the point of blockage. Afterwards the glymphatic system is overloaded. A large number of foci and toxins in the mouth area are capable of doing this. The most important are osteolyses in the jawbone (NICO, FDOCK). If these are not recognized and eliminated, various diseases of the brain can occur.

REFERENCES

1. Bohr T, Hjorth PG, Holst SC, Hrabětová S, Kiviniemi V, Lilius T, Lundgaard I, Mardal KA, Martens EA, Mori Y, Nägerl UV, Nicholson C, Tannenbaum A, Thomas JH, Tithof J, Benveniste H, Iliff JJ, Kelley DH, Nedergaard M. The glymphatic system : Current understanding and modeling.; in Science; Vol 25(9), pp. 104987. 2022 Aug 20.
2. Lauren M Hablitz, Maiken Nedergaard, The glymphatic system, Curr Biol 2021 Oct 25;31(20):R1371-R1375. doi: 10.1016/j.cub.2021.08.026.
3. Rasmussen MK, Mestre H, Nedergaard M. Fluid Transport in the Brain. 2022, In: Physiological Reviews. 102, p. 1025-1151 27 p.
4. Terhi J Lohela, Tuomas O Lilius, Maiken Nedergaard, The glymphatic system: implications for drugs for central nervous system diseases, Nat Rev Drug Discov 2022 Oct;21(10):763-779. doi: 10.1038/s41573-022-00500-9
5. Bouquot JE, Roberts AM, Person P, Christian J. NICO (neuralgia-inducing cavitation osteonecrosis): osteomyelitis in 224 jawbone samples from patients with facial neuralgia. Oral Surg Oral Med Oral Pathol 1992 ; 73 :307-319.
6. Bouquot, J. E., Christian, J. (1995) : Longterm effects of jawbone curettage on the pain of facial neuralgia. J. Oral Maxillofac. Surg. 53 : 387-397
7. Bouquot JE, Roberts A. NICO (neuralgia-inducing cavitation osteonecrosis): radiographic appearance of the „invisible“ osteomyelitis. Oral Surg Oral Med Oral Pathol 1992; 74: 600
8. Lechner, J. Herd, Regulation und Information – Störfelder im Zahn-, Mund- und Kieferbereich; HÜTHIG Verlag Heidelberg, 1. ed. 1993
9. Lechner, J. Störfelder im Trigeminusbereich und Systemerkrankungen: Ein systemisches Sanierungskonzept für Zahn-Störfelder, Verlag für Ganzheitliche Medizin 1999 Lechner, J. NICO – Ist fehlende röntgenologische Evidenz Beweis fehlender klinischer Existenz? 2010 ZWR Nov. 2010 (578-592)
10. Daugherty BL, Siciliano SJ, DeMartino JA, Malkowitz L, Sirotina A, Springer MS: Cloning, expression, and characterization of the human eosinophil eotaxin receptor. In: J. Exp. Med. 183. Jahrgang, Nr. 5, Mai 1996, S. 2349–54, doi:10.1084/jem.183.5.2349
11. Struyf S, Menten P, Lenaerts JP, Put W, D’Haese A, De Clercq E, Schols D, Proost P, Van Damme J: Diverging binding capacities of natural LD78beta isoforms of macrophage inflammatory protein-1alpha to the CC chemokine receptors 1, 3 and 5 affect their anti-HIV-1 activity and chemotactic potencies for neutrophils and eosinophils. In: Eur. J. Immunol. 31. year, No. 7, July 2001, pp. 2170–8, doi:10.1002/1521-4141(200107)31:7<2170: AID-IMMU2170>3.0.CO;2-D
12. Slimani H, Charnaux N, Mbemba E, Saffar L, Vassy R, Vita C, Gattegno L: Interaction of RANTES with syndecan-1 and syndecan-4 expressed by human primary macrophages. In: Biochim. Biophys. Acta. 1617. year, No. 1–2, October 2003, pp. 80–8, doi: 10.1016/j.bbame.2003.09.006
13. Proudfoot AE, Fritchley S, Borlat F, Shaw JP, Vilbois F, Zwahlen C, Trkola A, Marchant D, Clapham PR, Wells TN: The BBXB motif of RANTES is the principal site for heparin binding and controls receptor selectivity. In: J. Biol. Chem. 276. year, No. 14, April 2001, pp. 10620–6, doi:10.1074/jbc.M010867200

14. Ignatov A, Robert J, Gregory-Evans C, Schaller HC : RANTES stimulates Ca²⁺ mobilization and inositol trisphosphate (IP₃) formation in cells transfected with G protein-coupled receptor 75. In: Br. J. Pharmacol. 149. year, No. 5, November 2006, pp. 490–7, doi: 10.1038/sj.bjp.0706909
15. Doepp, Manfred: Topic: Mouth, Teeth, and Dentition; Journal of Advances in Bioengineering and Biomedical Science Research (ISSN: 2640-4133), 5(3): 186- 187. doi.org/10.33140/ABBSR.05.03.04
16. Doepp Manfred. (2022) Significant Findings in Tooth Roots and Jaw Bones Can Cause Serious Diseases. Clinical Research and Clinical Trials. 6(1) ; DOI : 10.31579/2693-4779/100
17. Doepp, Manfred MD, Could Dentistry Be a Major Factor in Human Poisonings? IOSR Journal of Dental and Medical Sciences, (IOSR-JDMS), 21(03), 2022, pp. 48-49. ISSN : 2279-0853, DOI : 10.9790/0853-2103104849
18. Doepp Manfred. Our Brains are Targets No. 1, Cleared for Firing - an Overview. American Journal of Biomedical Science & Research. 2021 - 14(3). AJBSR. MS.ID.001986. DOI : 10.34297/AJBSR.2021.14.001986