

## What Shall We Consider When We Plan For An Invasive Intervention?

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### Background

We have recently got, in Sweden, a new law on patient safety. The main idea is that the law will help to provide better patient safety by that we, in health care, will be better able to pay attention to, investigate and resolve treating risks and be able to evaluate anamnestic data that could be the reason why the patient seeking our assistance [1].

Media focuses more or less objectively on information about suspicious injuries after surgical procedures in health care [2]. We professionals know that any invasive interference is a potential risk for complications. Don't forget that all endodontic interventions are invasive. *Primus non nocere*-not to harm a patient is a beacon of health care.

Already in the early 1990s studies were published which described the post-operative pain following repeated surgical dental procedures [3]. Today world-leading research is under way in respect of consisting post-operative orofacial pain in Malmö Dental College under the direction of Prof. Thomas List [4]. The terms relevant to these kind of postoperative consisting pains is Atypical Odontalgia (AO). Patients with AO have clear signs of peripheral neuropathy and the discomfort starts always with or operative dental procedures or other trauma.

There are well-founded reports in pain scientific literature stating figures up to 40% development of general prolonged pain after trauma and surgery [5,6].

### Area-our experience

The authors have for many years worked in a multimodal orofacial pain unit where they encountered patients with persistent facial pain, often post-operative. Patients with post-surgical facial pain with long duration exhibits the same multisymptomatic picture that patients with other chronic physical pain.

We got, not rarely, referrals from general practitioners and colleges in surgery expressing their frustration that the procedures they performed, with the best intentions, does not lead to a good after process with regard to pain management and trouble-free healing.

Disappointed patients had not been pain relieved, but rather described an escalated pain with more troublesome symptoms in the form of a series of autonomic symptoms as signs of malaise. Unfortunately, it appeared that some of these patients had their pain as a direct follow by healthcare shortcomings [7].

### Have we engaged in medicine and dentistry too limited knowledge regarding the risk of prolonged postoperative pain?

Knowledge of the interaction between inherited and environmental factors for developing illness and disease (epigenetics) today is great. (The integrative medicine (within the framework of the PNEI psykoneuroendokrinoimmunologi- a term from stress physiology) [8-10] has paved the way for greater understanding of and pathways to possibilities to prevent iatrogenic post-operative prolonged pain.

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PNEI can be seen as a model of a human body that in the ideal state is in balance. (P) stands for mental (N) for neuronal (E) endocrine and (I) immunological processes in co-operation.

If we, for a long time, are subjected to an adverse impact load (stress) this balance will be tilted. This leads to autonomic dysfunction that manifests itself as malaise. Immunological surcharge affects the sensitivity of nervous system, from peripheral to which we term central sensitization [11,12]. The direct link between the immune system and the nervous system [13] may explain the pain problems that may be prolonged after invasive measures. The escalated pain following the invasive procedure is in most cases originating in a previously aroused nervous system [14]. The communication between the brain and the immune system dynamically modulate pain has in this manner physiological and pathological implications [15-17]. Everything relates to reduced healing ability.

### Summary

Prolonged stress development, due to psychosocial stress or somatic stress as a result of pain, can lead to both peripheral and central sensitization to become developed as a dysfunction of the autonomic nervous system. A human/patient with chronic life stress has an irritated nervous system, which can predispose to pain problems after operational procedures. Several different factors can interact and provide extended post-operative pain problems.

### How should we then make preoperative positions?

If you as dental therapists feel hesitant to perform an invasive odontological surgery due to a vague indication for surgery but have an anxious patient, is an extended anamnestic recording important to do. When the patient's medical history contains much pain problems of different location, illness without clear medical diagnoses or psychosocial stress, an assessment of a general practitioner or rehabilitation physicians with a broad holistic approach may be needed. Cooperation between dentist and physician with broad general medical skills can give help to choose the right treatment for the right patient. Sometimes care for more multi-professional character; both the physical therapist and the psychological therapist may be needed [18].

### Conclusion

The importance of all-encompassing anamneses cannot be sufficiently accentuated. The patient at the risk of escalation of pain as a result of further intervention should be identified and treated on the basis of the holistic approach. Then we can save the patient great suffering and bid society great savings.

**Finally:** Quality in medicine means: Doing the right thing at the right opportunity on the right person. That means sometimes doing nothing!

### Conflict of Interest

No conflict of interest exists.

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