Chronic pain without a known substrate.

Introduction

Chronic pain without a known substrate is one of the diseases most difficult to be treated. According to the current standards this is a kind of pain that no longer serves a purpose. A kind that once had a meaning but stuck as a fossil. A disease that must be arranged among psychosomatic diseases because physically there was and is nothing to be found.

A different way of thinking.

In the eighties a very small number of publications was known, mostly from ancient times, that suggested otherwise.

In addition, particularly in Germany, a treating method originated after the French – German war at the end of the 19th century, based on administering local anesthetics.

A method at which the used anesthetics seemed to work longer than was expected from its pharmacological effect. This method is known as "neural therapy".

In 1964 an investigation about skin temperature measuring appeared. The greater part of the pain spots turned out to be colder than their reference areas.

In 1962 a book appeared about the neurophysiological aspects of pain in relation to segmentally running diseases.

Both made a connection to skin temperature and pain.

In that same period of time technique became available that could measure pharmacologically working substances in picograms and nanograms.

Investigating prostaglandins started.

Skin temperature measurements became possible with an absolute sensitivity of $0.1\,^{\circ}$ C. Less well perfused areas appeared to be colder than well perfused areas and that was corresponding to the activity of technetium scans.

Questions

- 1. Is skin temperature a possible parameter to chronic pain without a known substrate?
- **2.** Can "Skin pain" be based on pain generating diseases in visceral organ systems expressed in the skin due to reflectively induced biochemical activity in the skin?
- **3.** In case of CRPS is there a deregulation of biochemical regulation processes in the skin and segmentally associated tissue?
 - a. Which biologically active substances can play a role in this deregulation?
 - b. In what way can linking effects occur?
- **4.** Can skin temperature measurements contribute to registering and measuring biochemical processes related to pain?

These questions are the base of scientific research in the eighties of the past century in a general practice.

Research set-ups.

Research background.

Based on these questions a number of investigations started based on chronic pain without a known substrate.

These investigations were divided into three groups:

- A. Skin pain as a result of segmental reflectory processes.
- B. Skin pain without segmental processes.
- C. Theoretical research.

In group A the question was:

- 1. Can computer controlled infrared thermography make visible to the skin surface reflectory processes such as viscero-cutan reflexes?
- 2. If so, is that possible up till physiological level?

In group B the question was:

- 1. Is temperature measuring by means of computer controlled infrared thermography a method to make pain spots visible?
- 2. If so: what do those pain spots look like, hot or cold with respect to their reference areas?
- 3. Does the temperature in those areas change by administering a perfusion changing pharmacon?
- 4. Does the experienced pain change at administering such a pharmacon?

To both groups it applied that: If pain sensation has anything to do with perfusion change in the skin investigation C follows:

- 1. Which substances can play a role in this?
- 2. Can these substances also play a role in deregulating a long lasting existing situation in an acute syndrome?

Effect.

Worked out this resulted in practical research such as:

- 1. Measuring skin areas during and after IUD placing
- 2. Measuring skin areas during pregnancies
- 3. Measuring skin areas on extremities before and after administering a perfusion improving pharmacon
- 4. Measuring painful skin areas before and after administering an NSAID in a mini dose

Theoretical:

- 1. Measuring and regulation techniques by prostaglandins in a deregulating system
- 2. Linking effects of prostaglandins at hormonal linking situations from a point of view of a normal menstrual cycle.

This research will be published in the next 1.5 years on the site.

Of course a lot has changed in scientific knowledge in the 25-30 years after this research. Despite this the starting point with respect to chronic pain without a known substrate has hardly changed. The technical treatment possibilities here and there have advanced very much, but the diagnostic is still very limited and the rationality of the treatments hardly improved. Also insight into the backgrounds is severely limited. For that matter the results of the research are still relevant and undisputed, even though the latter would only be the result of no more testing of the findings.

Considering all this the research will be discussed with today's knowledge and will be evaluated in the light of this knowledge.

I hope the site will be completed at the end of 2013.

Heerhugowaard, March 2012 P.H.E. Van der Veen