

## Cenesthetic Pain Phenomena: Erroneous Productions of the Brain

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Dedicated to Prof. Dr. Dr. h. c. Gerd Huber on the occasion of his 80th birthday

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### Summary

Pain is a neglected topic in the field of psychiatry. In psychic disorders, pain phenomena occur about as often as in somatic diseases. Chronic pain states and depressions overlap with respect to etiopathogenesis and symptomatology. In schizophrenia there may develop insensitivity which involves a life threatening danger in serious diseases on the one hand. On the other hand, a fraction of schizophrenic patients suffers from pain experiences which originate in the central nervous system. The so-called cenesthetic schizophrenia (Gerd Huber 1957) is an undergroup of schizophrenia with a high risk of misdiagnosis and consequently of improper treatment.

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**Key Words:** pain and depression – coenaesthetic schizophrenia – central pain – pain in psychiatric disorders

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### Terminology - critical comments

According to the classification of the International Association for the Study of Pain (IASP) *algology* is "the science and study of pain phenomena" [14, 26].

*Dysaesthesia* is "an unpleasant abnormal sensation, whether spontaneous or evoked".

*Central pain* is "associated with a lesion of the central nervous system".

*Pain* in general is "an unpleasant sensory and emotional experience which we primarily associate with tissue damage or describe in terms of tissue damage, or both".

These definitions do not regard that pain has not only sensory and emotional but also cognitive, evaluative, motivational, interactional and behavioural aspects [24, 30]. The most important objection to this definition is that pain is not a (silent) sensation or an (atmospheric) emotion but an important *force* which may lead, depending upon severity and duration, to manifold consequences in the muskulo-skeletal system, cardiovascular functions, ventilation, endocrinium, immune system, autonomous and central nervous system, in behaviour and internal living. Pain may be a protective, life-sustaining function on the one hand, but an important pathogenetic factor on the other hand which

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Sensory  
Cognitive  
Emotional  
Behavioural  
Motivational  
Interactional

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**Table 1. Aspects of pain [24, 30]**

*Pain has sensory, emotional and cognitive aspects. Pain is also a force which induces physiological changes in many organ systems, in behaviour and in human interactions.*

induces motor and social inability, deteriorates life quality and may cause suicide.

In the English and in the German language there is no natural word for those phenomena which are subsumed (10, 13) under the term *cenesthesia* (Greek = common feeling, body feeling). Apart from unspecific pain sensations which are described like nociceptive, neuropathic or psychogenic pain there are qualitatively new experiences of body perception. They are often paraphrased with "As if and yet in another way" [10, 13]. Cenesthesias are not listed in the IASP taxonomy. This fact is a major disadvantage and implicates harm for some patients with a lengthy medical history and a career of evaluative trials and therapeutic measures without appropriate diagnosis and therapy. The consequence is often frustration and despair.

In many case reports in the German psychiatric literature, bizarre body phenomena are described but attributed to hypochondriasis. In the system of Leonhard (1986) they are classified as "hypochondric depressions, hypochondric paraphasias, and hypochondric manias". This author remarked that the term "hypochondria" has two meanings, i.e. an abnormal engagement with one's own body functions and the occurrence of such complaints without organic cause. As pain tends to occupy the consciousness, and as cenesthesias are due to disturbed brain functions [6, 10, 12] and not to abnormal reactions or personality disorders, the term hypochondria should be avoided completely in this context.

### Pain in psychiatric disorders

Pain phenomena in psychic disorders and psychiatric diseases occur about as frequently as in somatic diseases [1]. Regarding the question of psychopathology as a tool of scientific and clinical recognition, from the view of an algologist is to state: Most pain experiences in depressive and schizophrenic disorders are not characteristic and even unspecific: So-called level-1-experiences [8]. In contrast, the level-2-experiences are qualitatively peculiar and characteristic. However, similar pain phenomena may occur in central diseases like thalamic infarction or multiple sclerosis [7, 13]. Their existence has a hypothesis-generating function but cannot prove a depressive disorder or a schizophrenic

disease. The level-3-experiences are evident psychotic phenomena such as first and second rank symptoms [8, 10a, 10b].

Pain complaints in psychiatric disorders are most often concentrated in head and/face, in the trunc area (back, chest, pelvis), and less frequently in the limbs. In contrast, organic central pain like in the thalamic syndrome or other post stroke syndromes usually involve the extremities. Psychiatric disorders with a high frequency of pain experiences are major depression, dysthymia, general anxiety disorder, somatoform disorder, conversion disorder and hypochondriasis [5]. In schizophrenia pain complaints are relatively rare according to some authors [5].

### Pain in patients with schizophrenia

In a series of clinical reports, indolence in schizophrenia is often reported [4, 28]. In the catatonic subgroup of schizophrenia, a denial of pain or a diminished reactivity is typical [2]. Chronic schizophrenics have higher experimental pain thresholds [9, 22, 30]. The indolence or denial of pain is a serious danger in major diseases like myocardial infarction [16, 23], fractures, peptic ulcer or appendicitis. It is one factor which reduces the life expectancy of these patients.

On the other hand, some patients with schizophrenia suffer from extremely severe pain experiences associated with helplessness and despair. This may contribute to the risk of suicide, as case reports have shown. Gerd Huber (1957) has elaborated and described the "cenesthetic schizophrenia" as the 4<sup>th</sup> type beside the paranoid, hebephrenic and catatonic form. It is characterized by abnormal experiences of body sensations and emotions. The reason for the description and differentiation was "the clinical observation of often diagnostically difficult and unclear cases, who reported in a peculiar and partly bizarre manner of manifold bodily complaints and curious experiences and in whom clear evidence of a psychosis was missing in the psychopathological cross-section view". A few investigations suggest [3] that cenesthetic schizophrenias are rarer than paranoid forms. Their data recruit from clinical patient groups. The figures in the general population and in the subthreshold (subdiagnostic) forms of the schizophrenia spectrum are unknown.

The cenesthetic schizophrenias stand close to the symptomatology of central organic lesions and diseases. They form "so to say the organic pole within the group of schizophrenias" [10]. Phenomenologically, the cenesthopathic malsensations can not be differentiated from organic central pain states as they also occur in central pathology, especially in lesions affecting the thalamic area or thalamic-cortical circuits. Thus, they require additional information including careful somatic evaluation and in some cases a long term observation.

The dynamic changes in localisation, quality, intensity, concomitant symptoms, and the metamorphosis in the course of the illness reveal their functional character. In all respects, pain parameters may also change. Organic central pain states

are usually circumscribed; they are determined by a fixed point to point relation. Often, there is a crescendo of signs and symptoms. The quality of pain in psychic disorders is not specific. However, many case reports mention burning, shooting or tingling pain [7, 10, 21; s.a. 8, pp 89-111]. They are relatively typical for neuropathic pain, for disturbances associated with the sympathetic system or central lesions. First of all in severe depressive and schizophrenic diseases, the reality of pain is often described as burning. Concomitant paraesthesias and dysaesthesias are indicators for their origin in the nervous system. The psychopathological cross-section picture, the histories and long-term observations show that there is no clear cut separation from schizophrenic to schizoaffective and depressive disorders in which also cenesthesias were described [7, 13].

The evaluation of history and biography yields often more relevant information than the actual symptomatology. In regard to the fluctuations and the phenomenological change in the course of the disease, the unique biography and course of histories, the idiographic (individual) understanding seems to be more fruitful than the nomothetic (statistical) approach. But without any doubt, there is a lack and a need for statistical data.

How is the controversy of the rare incidence of pain complaints of schizophrenics on the one hand and the cenesthetic suffering on the other hand to be resolved? Hypothetically, insensitivity, experimental hypalgesia and/or diminished motor reactivity are attributed to basic deficiencies, as already was remarked [15].

#### Cenesthetic pain phenomena as faulty brain productions

In the taxonomy and classification of IASP [14] both the unspecific and the hallucinatory pain phenomena in psychosis are psychologically explained. Due to the comprehensive work of Huber, there is overwhelming scientific evidence that schizophrenic experiences and abnormal behaviour are encephalogenic [6, 10b, 12, 13]. They are an expression of cerebral alterations of functions [12]. Accordingly, somato-therapy is the first line treatment i. e. the administration of psychopharmacological drugs. This regime must be complemented by supporting psychotherapeutic and sociotherapeutic measures as necessary components of the appropriate multimodal treatment.

Cenesthetic pain experiences can occur as foregoing complaints of an impending psychosis. They were described as constituents of *Huber's basic symptom concept* [8, 11]. Depending upon mental and physical working strain, emotional burden and situational stress, transitions into a typical schizophrenic psychosis with first rank symptoms were observed [17]. In the opposite direction, a florid psychosis may fluctuate back into postpsychotic pure deficiency syndromes ("pure defect" [11]) with persisting cenesthetic phenomena. But in some schizophrenic patients only cenesthesias occur and first rank criteria according to Schneider are never reported. As the cenesthetic experiences occur not only in the pre- and postpsychotic phases, but also during open psychotic exacerbation, they can be

regarded both as smouldering (inactive stage) and sometimes "flaring", florid (process active stage) phenomena of psychoses. They are erroneous products of the central nervous system which even break through an increased pain threshold.

The exclusive attribution of the cenesthesias to a *pure deficit* [11] has not proven to be correct. In view of the transitions from level-1- to level-2-basic symptoms and level-3-symptoms (i.e. first rank symptoms) in the course of the schizophrenic disorder, cenesthesias are obviously not only deficiencies or minus symptoms but also expressions of a productive psychosis which may flare up under the impact of stress [10b; s.a. 8, pp 3f, 143ff]. This postulation takes into consideration the vulnerability model of Zubin and Spring (1977). Paying regard to the "course dynamic" of schizophrenias and the occurrence of cenesthesias both as "minus" and as "positive" symptoms and being aware of the severe suffering of the patients, they must be treated more actively than it is the case at present. The level-2-phenomena with their transitions into quite uncharacteristic level-1-experiences or into the florid psychotic level-3-symptoms can be regarded as indicators of a "medium" activity of schizophrenia.

#### Depression and pain

There is a broad overlap between depressive disorders and chronic pain states [19, 27, 29]. Depressions may precede pain and in other cases they occur simultaneously as a constitutive component. In patients with unbearable somatic pain like postherpetic neuralgia, chronic phantom and/or stump pain, an *algogenic psychosyndrom* develops as a consequence. It is characterised by dysphoric-depressive mood, irritability, narrowing of experiences and interests, insomnia and in some patients by the risk of suicide. From the view of a psychopathologist, this algogenic psychosyndrome differs from major depressions, especially from the classic "endogenous" depression, with its reduced emotional resonance, exacerbation of depressive suffering and behaviour in the morning and of psychotic symptoms in some patients. With respect to biochemical, neurophysiological and endocrinological findings there are common features between chronic pain and depressive disorders [18]. The majority of depressive patients suffer from pain as a constitutive part of the illness [20]; in traditional psychiatry these pain experiences, bodily aches and malsensations are described as vital disorders ("Vitalstörungen" [6, 7, 10b, 11]) In some of them, pain dominates other components of depressive symptomatology so that the underlying disturbance may be not diagnosed [29, 30]. In the history of ideas, the importance of somatic symptoms as components of depressive disorders were recognized gradually [29].

Author (s)	year	n	%
Pilowsky et al.	1977	100	6
Wörz	1980	100	5
Kramlinger et al.	1983	100	5
Krishnan et al.	1985	71	14
Large	1986	50	2
Pilowsky	1987	394	6
Average			6

**Table 2.** Endogenous depression in chronic pain patients  
In the 1970's - 1980's, an endogenous depression was diagnosed in 5-6% of inpatients with chronic pain [27, 29]. In those patients, pain suffering cannot be reduced to nociception. A selection bias is probable.

Author(s)	year	n	%
Kramlinger et al.	1983	100	25
Reich et al.	1983	43	23
Katon et al.	1985	37	14
Hayley et al.	1985	63	49
Krishnan et al.	1985	71	44
Fishbain et al.	1986	283	5
Large	1986	50	8
France et al.	1987	73	43
Average			26

**Table 3.** Major depression in chronic pain patients [27]  
The percentage of chronic pain patients with a Major depression according to the DSM - criteria of the 1980's is higher than the quota of endogenous depressions. The broad variance of the figures represents the heterogeneity of inpatient and outpatient groups in institutions with different structures.

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