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Is the concept of somatoform prosthesis intolerance still up to date?

Introduction: Until recently “somatoform prosthesis intolerance” covered a wide range of patients with diffuse symptoms.

Material and Methods: Meanwhile, new dental conditions have been established so that it is possible to differentiate among Burning Mouth Syndrome (BMS), atypical odontalgia (persisting [idiopathic] dental alveolar pain), occlusal dysesthesia, and somatoform prosthesis intolerance. These clinical pictures can be categorized under diagnosis of “somatic symptom disorders”, which was newly established in 2015. It is marked by a duration of symptoms of more than 6 months, intense preoccupation with those symptoms, and a significantly reduced capability to cope with everyday life. The formerly used diagnosis “somatoform prosthesis intolerance” can likewise be understood as a subcategory of specific dental somatic symptom disorder.

Conclusion: Based on available clinical experience it can be assumed that this diagnosis will be particularly applicable for patients that are equipped with objectively well-fitting fixed and/or removable dentures but experience difficulties with them and therefore attract attention with somatic stress symptoms. A structured approach is necessary for initial and basic treatment. This is described by the S3-guideline “functional disorders”.

Keywords: somatoform prosthesis intolerance; burning mouth syndrome; occlusal dysesthesia; atypical odontalgia; somatic stress disorder; functional disorders

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Review

In 1921, Moral and Ahnemann [33] described the course of disease of a 50-year old patient, who complained about tongue pain, in a paper on borderline cases: “Her depiction appears unclear and blurred ... if pain showed up on the right side of the tongue once, it appeared on the other side at the next examination [...] suddenly also here [...], so that the pain can also be lead from one nerve region to another [...]”. The authors found no clinical abnormalities for the mentioned complaints. They described the prostheses as well-crafted and occluded, the elimination test was negative, meaning that the patient was complaining about the same amount of discomfort while not wearing prostheses. The authors highlight the uselessness and specifically the damage caused by countless treatment attempts, which usually lead to chronification. They believe that the desire to help tormented patients leads to therapeutic errors and mishaps. The authors are giving a lot of attention to a goal-oriented, possibly interdisciplinary somatic diagnosis of exclusion. They do not consider it the dentist’s job to – according to them – treat hysteria, but rather to perform necessary dental treatment. The difficulties of making the diagnosis in the manifold and multifaceted clinical picture indicate, that for routine dental measures, usually “... superficial recording of the anamnesis is sufficient”, and with that the borderline cases depicted by

Diagnostic criteria of a psychogenic prosthesis intolerance according to Müller-Fahlbusch	
1.	Discrepancy between description of symptoms and anatomical limits
2.	Discrepancy between chronology of symptoms and complaints and the known development known to us by clinical experience
3.	Ex non juvantibus (a normally helpful treatment does not lead to success)
4.	Unusual co-participation of the patient in the course of the disease
5.	Coincidence of biographic-situational results and beginning of the complaints

Table 1 Diagnostic criteria of a psychogenic prosthesis intolerance according to Müller-Fahlbusch [34]

them are mostly unrecognizable. The clinical picture of “hysteria”, which according to Moral and Ahnemann is based “... on a disorder of a normal relationship between processes of our conscience and our physicality”, for which they determine a basic condition “... that hysteria is an illness of the soul and that a treatment should be used; ...”, which was described in 1859 by the French physician Briquet [5] in his work “Traité clinique et thérapeutique de l’hystérie”. He also shows a descriptive approach to analyze the disease similarly to Moral and Ahnemann [33]. He lists a variety of physical and mental symptoms, which appear in “hysteric” sick patients in the form of a protruding leading symptoms or in combination with multiple complaints, possibly

alternating with different emphasis. In the meantime, the work of Briquet has been picked up by many authors. Essentially, the attempt was made to systematize his observations assisted by Guze [17–19]. With the introduction of the DSM-III in 1980 [3], the Briquet-Syndrome was first incorporated as a framework of the prototype of somatization disorder in its own category in a clinically binding classification system. Müller-Fahlbusch and Marxkors [30] shaped the term “psychogenic prostheses intolerance”, which had already been used by Peterhans in 1948 [36]. Based on an interdisciplinary research project conducted in 1976 [39], Müller-Fahlbusch and Marxkors understood this as “complaints that do not fit the picture of the respective findings.

	Somatic symptom(s)	
Criterion A	are distressing result in disruption of daily life	
	Psychological Characteristics regarding physical symptoms	
Criterion B	Exaggerated and persisting thoughts on the seriousness of the present symptoms	cognitive dimension
	Persisting and pronounced high level of anxiety regarding health of symptoms	emotional dimension
	Excessive effort in time and energy that is expensed for the symptoms	behavioral dimension
Kriterium C	Burden of symptoms for longer than 6 months	

Table 2 Somatic Symptom Disorder: For a diagnosis according to DSM-5 (Diagnostic and Statistical Manual of Mental Disorders) criteria A, B (at least 1 of 3 psychological dimensions) and C must be met [11, 25].

List of symptoms	
• Stomach pain or indigestion	
• Back pain	
• Aching arms, legs or joints	
• Headache	
• Chest pain or shortness of breath	
• Dizziness	
• Fatigue or lack of energy	
• Insomnia	
Severity of somatic burden	
0 – 3	None to minimal
4 – 7	Low
8 – 11	Moderate
12 – 15	High
16 – 32	Very high

Table 3 Somatic symptoms scale to determine the somatic symptom burden (SSS 8) [28]. A sum score of 0 = “none” to 4 = “very high” is formed to answer the “how high was the burden caused by the mentioned symptoms during the past week”.

The complaints are more general, less tangible and do not allow for direct conclusions about the prosthetic work” [31, 34]. While Marxkors understood this term in the prosthetic context, Müller-Fahlbusch extended this viewpoint with psychiatric aspects. In an interdisciplinary study he diagnosed 57 % of patients with psychogenic prosthesis intolerance with phasic and chronic depression, 21 % of patients with abnormal personality disorder and 19 % of patients with an abnormal experience response. He classified about 3 % of patients in the category of schizophrenics. Only in the course of further cooperation psychosomatic diagnostics developed, but further down the line, a viewpoint in psychosomatic diagnostics which was especially expressed in the catalogue compiled by Müller-Fahlbusch [34] of 5 diagnostic criteria to recognize psy-

chosomatic conspicuous patients (Tab. 1).

Müller-Fahlbusch attaches special importance to the time of treatment of a possibly necessary somatic therapy and depicts recommendations of how to deal with these patients. Just like Haneke [20], he recommends the regulation of psychiatric drugs, usually antidepressants. Balters [4] advises psychological care of the ill that is supposed to help turn the loss of their teeth into something positive. Marxkors [31] warns against overpowering when dealing with difficult patients and to not expand treatments against the wishes of the dentist, just because the patient wishes or demands it. Other authors [8, 48] recommend to consider solid constrictions in “patients with psychosis”. All authors are in agreement regarding a crucial and necessary interdisciplinary cooperation.

In 2008, the term “psychogenic prosthesis intolerance” was replaced by the term “somatoform prosthesis intolerance” [13]. With this, the necessary adjustment of the nomenclature in general medicine occurred [12]. Besides the Burning-Mouth-Syndrome, the somatoform pain disorder and body dysmorphic disorder (as a special form), the somatoform prosthesis intolerance presents a relevant subdivision of somatoform disorder: “The characteristic of somatoform disorder is the repeated presentation of physical symptoms in combination with persistent demands after examinations, despite repeatedly negative results and reassurances by doctors, that the symptoms are not based on any physicality. If there is some organ pathology present, it does not explain the nature and extent of the symptoms and the pain and the internal investment of the patient”. With the classification of the illness pattern of “somatoform prosthesis intolerance”, the first criterion according to Müller-Fahlbusch takes on an extended dimension. While Müller-Fahlbusch relates the discrepancy to anatomical structures – “medical psychology and psychosomatics does not work without anatomy” [34] –, demanded with the inclusion of somatic findings, that the complaints within context are evaluated of possible, also pathological findings, regarding their nature, expansion and intensity in order to detect an available discrepancy to the mentioned complaints.

Characteristics of a “somatoform prosthesis intolerance”

Fundamentally, the question is raised whether or not the term “somatoform prosthesis intolerance” summarizes this group of patients accurately enough today, or if further classifications exist by now that allow a more precise distinction and with that more targeted treatment options. There is hardly any data on who is typically affected by these symptoms. Studies [32, 39] could show, that women aging between 60 and 70 sought out a specialized consultation 5-times more frequently. The main symp-

Symptoms	Burning-Mouth-Syndrome	Persisting idiopathic facial pain	Atypical odontalgia	Occlusal dysesthesia
Diagnosis criteria	<ul style="list-style-type: none"> – daily burning/burning pain or feeling of dysesthesia – > 3 months – at least > 2 hours per day 	<ul style="list-style-type: none"> – pain nearly all day – at most low impairment of night's sleep 	<ul style="list-style-type: none"> – daytime pain, brief to persisting – unimpaired night's sleep – > 4 months – spontaneous beginn, that can (often) be delayed following the trauma of a peripheral trigeminal nerv (experiencing pain during such course of action increases the risk) 	<ul style="list-style-type: none"> – awareness only during waking state
	<ul style="list-style-type: none"> – women, – > 50 years old – reduced quality of life – increasing intensity during the course of the day 	<ul style="list-style-type: none"> – fluctuating intensity – at most just beginning anatomically limiting expansion – “peculiar” disease causation modell 	<ul style="list-style-type: none"> – diffuse expansion tendency – variable intensity – pain amplification through peripheral stimuli – allodynia/hyperalgesia – uncertain pain elimination – ex non iuvantibus 	<ul style="list-style-type: none"> – “occlusally fixed” model of illness – intensive occupation with the disorder – Chronification tendency with many unsuccessful changes in occlusion – dismissive evaluation of previous practitioners – glorification of the current practitioner – psychosocial burdens/impairment at the beginning and/or over the course – further physical ailments usually without objectifiable cause and plausible course of therapy
	<ul style="list-style-type: none"> – no local/general medical and psychological causes 	<ul style="list-style-type: none"> – no relevant pathological results 	<ul style="list-style-type: none"> – missing adequate pathological results 	<ul style="list-style-type: none"> – no relevant malocclusion
Screening/ documentation forms (if available)		Pain diary regarding modulation factors, possibilities of relief and accompanying symptoms		<ul style="list-style-type: none"> – Chronification: GCS [43, 45]. – anxiety, depression: HADS [21]; PHQ-4 [27]; DASS [20,34]. – emotional stress: SRRS [1, 22]; – somatization: BL-R / BL-R' [46] – localisation of pain: full body drawing [42] of all existing pain regions.

Table 4 Typical characteristics, screening options, differential diagnoses and supportive information in diseases appearing diffuse in the orofacial

toms listed by affected patients are pain, burning of oral mucosa and adaptation disorders (mostly related to prostheses and often specifically related to the “difficulty to bite

down)”. These symptoms can appear localized or radiate further into the oral cavity and are solely associated with the oral cavity based on the patients’ understanding of the clinical

picture. Usually the symptoms last longer than 6 months. The patient’s path in search of relief is characterized by countless diagnostic procedures and therapy attempts (“doc-

Symptoms	Burning-Mouth-Syndrome	Persisting idiopathic facial pain	Atypical odontalgia	Occlusal dysesthesia
Differential diagnoses (screening, if available)	secondary burning of the oral mucosa	neuropathological pain (possibly triggered by surgery in the specified pain region)	dental causes	objectifiable malocclusion craniomandibular dysfunction/bruxism CMD screening https://www.dgfdt.de/documents/266840/3732097/CMD-Screening+DGFDt/cc704187-a983-4eed-893c-614ae3969bd1 bruxism screening https://www.dgfdt.de/documents/266840/3732097/Bruxismus+Screening+02_20/8039b42a-9640-47e9-bd9f-0717a3c4d423 functional status https://www.dgfdt.de/documents/266840/406693/Erfassungsfomular+Funktionsstatus+2012/1d692d7a-bf94-4509-9035-a091a82d58f7?version=1.0
Supporting information (if available, retrievable from DGZMK: https://www.zahnmedizinische-patienteninformationen.de/patienteninformationen)	https://www.zahnmedizinische-patienteninformationen.de/documents/10157/903264/Zungen-und_Schleimhaut_brennen/	https://www.zahnmedizinische-patienteninformationen.de/documents/10157/1129556/268572_1567299_Chronischer+Kiefer-+und+Gesichtsschmerz.pdf		https://www.zahnmedizinische-patienteninformationen.de/documents/10165/1430990/PI+Bruxismus-final.pdf https://www.zahnmedizinische-patienteninformationen.de/documents/10157/1129556/268572_1567355_Kiefergelenkschmerz.pdf/

Table 4 Typical characteristics, screening options, differential diagnoses and supportive information in diseases appearing diffuse in the orofacial

tor hopping, doctor shopping"). It is not uncommon to observe that patients affected, as well as people close to them subject their entire lives to these complaints and show a severely reduced quality of life. These main symptoms are accompanied by complaints about dry mouth or altered sense of taste. The courses of complaints are individually different and vary regarding their intensity. These characteristics regarding course and duration, understanding of the disease or dealing with the complaints are key criteria of the newly added diagnosis

of "somatic stress disorder", which can therefore be seen as a superordinate category.

Somatic Symptom Disorder (SSD)

SSD refers to a new classification in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) [7, 25, 26, 41]. This should diagnostically record about 30 % of patients in basic care, that are severely affected by existing physical symptoms and restricted in their daily lives. In order to make this diagnosis, it is irrelevant if the characteristics listed in table 2

were triggered by a somatic and/or mental reason. In general medicine, the severity of the burden is determined by respective points on an 8-symptom scale (SSS 8) [16, 28] (Tab. 3). Typical dental symptoms have not been recorded in the SSS 8. In order to assess a potentially generally existing problem, this symptom scale can be inquired within the context of general anamnesis in a regular dentist appointment. This offers the chance to recognize tendencies and risks of expansion into the jaw and face region with possibly necessary dental measures. Depend-

Initial basic care		Extended basic care	
In the mild form		When visiting the doctor repeatedly and “doctor-hopping-tendency”	
Recognition	Comprehensive anamnesis <ul style="list-style-type: none"> – main symptoms – accompanying symptoms – impairments – patient behavior – initial recording of findings – demand preliminary findings – avoid redundancies – further examinations with reserved and strict indication 	simultaneous diagnosis	To emphasize the equality of physical and psychosocial influencing factors <ul style="list-style-type: none"> – Attention: do not act on “pressure by the patient” “slow down” – Goal-oriented, clear setting – No technical supplementary examinations to calm down the patient – explain regular findings – demonstrate prognosis/risks of a one-sided somatic approach
Reassurance	Evaluation of findings and risks <ul style="list-style-type: none"> – Announce “expectable” normal findings – No downplaying model of disease in order to expand psychosocial viewpoint 	Accomplishment	<ul style="list-style-type: none"> – biopsychosocial explanation model originating from subjective disease theory e.g. using individual amplifiers, modulation factors as well as possibilities of relief – clarify expectations and correct if necessary – emphasize autonomy, develop “active” coping strategies – regular appointments independent of discomfort
Advice	<ul style="list-style-type: none"> – “take the patient seriously” – emphasize credibility – work out positive resources 	Possibly initiate interdisciplinary cooperation	<ul style="list-style-type: none"> – Transparent findings assessment – Motivate patients to take up psychosocial therapy options – dental findings to avoid the polypragmatic approach “monitoring”
Supporting information	https://www.awmf.org/uploads/tx_szleitlinien/051-001p3_S3_Funktionelle_Koerperbeschwerden_2020-01.pdf		
Therapeutic “support”	wait and see: Patient monitoring and supervision while avoiding measures that are not strictly indicated		

Table 5 Diagnostics and therapeutic approach [following 37]

(Tab. 1–5: A. Wolowski)

ing on the severity of the disorder, it has to be decided if an explanation of risk by the dentist is sufficient or if an interdisciplinary approach has to be pursued. It can be helpful for such a decision to differentiate between relevant dental clinical pictures. The necessity of this differentiation also results from the fact that an interdisciplinary setting with treating “non-dentists” requires explicit details on dental context.

Dental diseases with symptoms seeming diffuse

It can be differentiated between dental symptoms within the group of somatic stress disorders by using a complaint-related classification. The leading symptoms are burning of the oral

mucosa, pain and occlusal “malfunctions”.

Burning of the oral mucosa: Scala et al. [40] differentiate the secondary burning of oral mucosa that can be diagnosed following an underlying dental, general and mental disorder of idiopathic burning of the oral mucosa, which is classified as BMS [47]. According to the currently valid definitions [24], the diagnosis BMS is based on a diagnosis of exclusion. The different current definitions regarding BMS differ mainly in the specification of total duration and the daily course. Because BMS has not been defined uniformly in literature, it cannot be differentiated regarding mental factors if this is the cause for a secondary burning of the oral mucosa or if men-

tal factors arise following an (idiopathic) BMS. Different levels of anxiety are listed and in 20 % of BMS patients, the phobia of cancer can be observed. Depression and somatization disorder are named as further diagnoses [2, 6, 14, 27, 29, 37] (Tab. 4).

Pain in the sense of persistent idiopathic facial pain (PIFP)/ atypical odontalgia (persistent [idiopathic] dental pain): PIFP refers to the pain, that does not meet the criteria of a facial neuralgia and is not associated with signs of an organic lesion. “The pain is present, mostly continuous, one-sided and difficult to locate. Sensitivity symptoms or other deficiencies are not present. Further examinations including X-Ray diagnostics of the face and jaw are without pathological

findings. Either trauma, or an operation of face, jaw and teeth can cause the pain. However, there can be no current pathological local findings" [10], because that would categorize it as a diagnosis of exclusion [15].

A localized form of the PIFP is described as atypical odontalgia, in which a pathomechanism of a neuropathological persistent pain comparable to phantom pain is taken on [15, 44]. Based on missing pathological findings, this is also a diagnosis of exclusion. Endodontic procedures are described as risk and trigger factors or as an experienced painful dental treatment before a tooth extraction (Tab. 4).

Occlusal dysesthesia: The symptoms of occlusal dysesthesia (OD) describes the phenomenon, that patients complain about pain originating from their occlusion, which is clinically not objectifiable. Most patients affected are burdened mentally and show characteristics of depression and/or anxiety. They are often solely focused on a somatic/occlusal cause of their pain and every therapy attempt according to the rules with mostly rotating practitioners almost always leads to intensification of the complaints. The median age described for these symptoms in literature is 52 years (plus/minus 11 years), which also goes along with clinical experience in specialized consultation. Etiological factors discussed are psychopathological causes, neuroplasticity, phantom phenomena and changes of proprioceptive stimuli and transmission [9] (Tab. 4).

Structured approach

Given the mostly complex and diffuse ailments and also the psychological strain of the affected, it is the most important goal to identify influencing factors early and inform comprehensively, so that affected people are actively included in the diagnostic and possibly therapeutic process. The guideline on "functional disorders", published in 2019 [37], which specifically included the clinical picture of somatic stress disorder on the spectrum of the summarized clinical pictures, prescribes a structured approach. These are based on the severity of the course of the disease and are classified

into the always necessary basic care and the extended care during longer hospital stays as well as multimodal therapy. It should be emphasized in this context that further dental treatment support should be maintained and no either-/or-principle should be initiated with the referral to other specialist disciplines. This issue is written out to supposedly lead to a better mutual understanding of co-practitioner and patient. The basic principle here is maximum transparency. This requires a sustainable and with that resilient doctor-patient-relationship, which is supported by a structured approach (Tab. 5).

Which symptoms remain of the "somatoform prosthesis intolerance"?

In conclusion, the question is raised if the diagnosis "somatoform prosthesis intolerance" is justified today. This can be understood as a subgroup of dental-specific disease in the sense of a somatic stress disorder in patients whose leading symptom is burning of the oral mucosa, pain and/or occlusal difficulties to general physically severely burdening symptoms. Based on the available clinical experience one can assume that this diagnosis applies especially to patients that are fitted with (fixed and/or removable) prostheses and experience difficulties with them and show signs of somatic stress. The diagnosis "somatoform prosthesis intolerance" should not be a diagnosis of exclusion, but rather it is more important to detect indications of somatic and psychosocial influences, if a differential exclusion of the specific clinical pictures follows. It is to be expected that the diagnosis "somatoform prosthesis intolerance" can overlap with the described dental diseases. A valid and identical approach according to psychosomatic basic care for all differential diagnoses is helpful and crucial for the practitioner.

Conflicts of interest

The author declares that there is no conflict of interest as defined by the guidelines of the International Committee of Medical Journal Editors.

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(Photo: A. Wolowski)

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