

Assessment criteria for compensation of occupational bladder cancer

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1. ABSTRACT

In Germany, more than 100 bladder tumor cases are annually recognized as occupational disease and compensated, given that medical experts regard exposure to carcinogenic aromatic amines as a likely cause of cancer. The amount of compensation is initially based on the tumor staging and grading at the time of initial diagnosis (“basic MdE”) [MdE – reduction of earning capacity] and is adapted after a recurrence-free period of 2 and 5 years, respectively. In the event of treatment or tumor-related secondary conditions, the monthly compensation increases based on the severity of the objectified functional disorder. In the following article, medical experts specializing in this field provide a complete list of all known disorders, including treatment-related loss of a kidney or erectile dysfunction. In addition, the weighting of medical criteria in the assessment and calculation of the compensation is analyzed in greater detail. Since the given criteria are based on comprehensible experiences of urologists with their patients, they also provide medical experts in other countries with valuable points of reference for the calculation of the compensation.

2. INTRODUCTION

Various countries have established different legal systems to compensate injuries that occur during work and occupational activities. In Germany, the statutory accident insurance was initiated as an insurance for the benefit of the employees for the account of the employers, while indemnifying the latter from claims under civil law on parts of the injured. It is a branch of social insurance. As a compulsory insurance, it covers all injuries sustained by the insured as a result of insured occupational activities. Insurance claims include accidents at the workplace, travel on the way to and from work as well as occupational diseases (1). Occupational diseases are diseases suffered by the insured in their working environment, which are either defined in Appendix 1 to the German Occupational Diseases Ordinance (2) or are known to be work-related according to latest scientific findings. Statutory accident insurance benefits include monetary compensation for the insured or their surviving dependents (e.g. wage replacement benefits and retirement benefits) and – in the event of death – benefits for surviving dependents (e.g. widow’s/widower’s and orphan’s pension). The legal basis is the Seventh Volume of the German Social Security Code

Table 1. Interests of the parties involved

Insured	Fulfillment of his claims Social justice
Client	Expert competence Compliance with scientific findings and empirical values Smooth settlement Adequate price-performance ratio
Mutual benefit association	Defense of unjustified claims Social justice Equal treatment Legal security

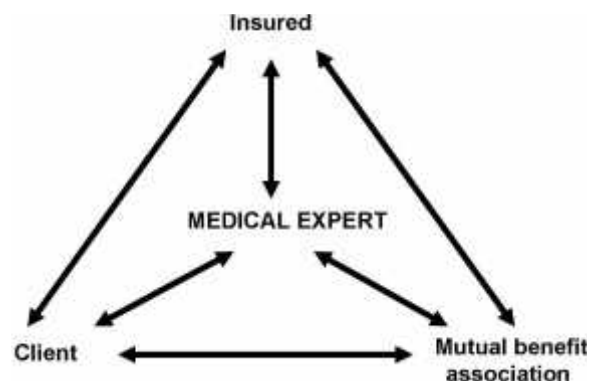


Figure 1. Compensation of occupational bladder cancer cases: The conflict of interests between the parties involved.

(SGB VII) (1). The statutory accident insurance costs are covered solely by the employers in the form of insurance premiums, the amount of which depends on the member company's individual risk profile and frequency of claims. The amount of benefits paid to the affected employees is calculated on the basis of their previous wages and the degree of reduction of earning capacity (MdE).

The degree of this MdE depends on the extent of loss of earning capacity for the individual insured. This means the ability to earn a living using one's educational, physical and mental abilities for available work opportunities in all areas of gainful employment (common definition since (3)). For this reason, two assessment steps need to be taken when rating the MdE: (i) determining the remaining physical, mental and emotional abilities of the insured as a result of the occupational disease, and (ii) the limitations of the remaining work opportunities in all areas of gainful employment caused by the functional loss. The extent of these limitations – the MdE – is investigated within the scope of functional medical examinations (expert report) (4). The insured receives a pension for compensation.

Although legal systems may differ internationally, their essential steps are basically comparable to the German system.

According to predefined criteria, the objectified functional limitation is allocated to values (MdE) that are summarized in literature as empirical values. Since these values have been repeatedly confirmed by medical experts, insurance providers and courts of law and are accepted by

the affected individuals, they have proven to be realistic and accurate and thus socially reasonable (4). The monetary compensation, in turn, is in a clearly defined relation to this value.

Disputes over the results of expert reports that determine the amount of compensation are a regular occurrence during court proceedings. In times of increasingly scarce human resources, conflicts over entitlement to social security benefits burden courts and insurance providers, incur considerable costs, lengthen the litigation process and create a rift between the parties, sometimes making it impossible to reach a legal agreement (5).

This is not only due to excessive claims by beneficiaries or unfair decisions by benefactors, but also due to the inferior quality of expert reports, which may encourage parties to make objectively unreasonable demands (5).

3. PILLARS OF ASSESSMENT OF OCCUPATIONAL DISEASES

3.1. Impartiality

All too often, examiners fail to understand the principle of providing an impartial expert report to the best of their medical knowledge and belief as a physician by relying solely on their best judgment in their medical responsibility without being bound by instructions. As a result, they judge essential facts for the expert report according to their subjective perception. "They find it hard to detach themselves from an almost biological urge to take sides. Unwittingly, they succumb to an emotionally biased way of thinking, and are tempted to follow the claimant's unprofessional need for causality" (6). In doing so, they neglect to realize that instead of their personal views of justice; there are specifically standardized assessment criteria that must be complied with in their expert reports.

A physician's partiality towards his patients is an admirable quality worth preserving (5). Nevertheless, whenever a medical expert agrees to provide an expert report – to which he is not obliged by German statutory law (7) – he needs to be aware that shifting his role from healthcare practitioner to medical expert dictates a commitment to neutrality and takes great discipline (8). By accepting this responsibility, he finds himself in conflict (Figure 1, Table 1) between the insurance provider, the insured, and the mutual benefit association (5), where he is expected to give his impartial assessment after thorough examination. This assessment has to meet the requirements of all parties involved in compliance with applicable law, jointly created rules and standards as well established empirical values. The medical expert must not represent the interests of the employer or the person to be examined. For the physician performing the duties of a medical expert, this means that neither "*in dubio pro aegroto*" (When in doubt, in favor of the sick person) nor a "well-meaning" and "generous" judgment to the disadvantage of the benefactor, nor a medical judgment of social-medical questions influenced by sympathy or antipathy are

permissible. The tense relationship between the two areas of medical responsibility – i.e. being a healthcare practitioner on the one hand and a medical expert on the other – often leads to conflicting objectives to the detriment of an impartial assessment (8).

3.2. Functional assessment as the gold standard

The rating of the assessment parameters (referred to as MdE values in German social law) that determine the amount of compensation is performed on the basis of pure functional assessments at the time of examination in accordance with German law. In particular, unconfirmed diagnoses and generalizing descriptions of symptoms or the perceived discomfort are not sufficient for this purpose. All the functional impairments taken into account in the overall assessment need to be objectified using appropriate examination techniques. Furthermore, they need to be categorized as injuries according to the legal criteria of full evidence, which is provided, as defined by law, when there is such a high degree of likelihood that no reasonable human being with a firm grasp on reality could have any doubts (e.g. 9). Voiding disorders and incontinence, for example, need to be verified using a micturition record, urodynamic examination, as well as a pad test. Based on case history alone, such disorders cannot be rated in compliance with insurance law. Neither the severity of the sustained injury, nor problems during recovery nor the prognosis can be taken into account in the assessment results. The medical expert may suggest follow-up examinations on an annual basis or at longer intervals, if he has reason to believe that a condition may change considerably within the proposed period of time (5).

4. CALCULATION OF COMPENSATION [MDE]

4.1. Basic MdE

Given these requirements, the calculation of compensation for cancer represents a special case. At an early stage, cancer does not cause any organic functional disorders. According to the legal framework of functional assessment specified above, it could therefore not be given an MdE rating.

However, after being diagnosed with cancer, patients have to cope with their new situation and its impact on their plans in life. During this adjustment period, their productivity is reduced considerably, and they are less motivated and creative. At their workplace, it takes great effort for them to perform as expected.

During the first two years following tumor resection/resection of the most recent recurrence, patients are usually significantly limited in their overall ability to function. The patients' condition usually improves in the period thereafter, and, after 5 years of being cancer-free, they are able to perform just as well as their healthy peers (10). This procedure has been proven by experience and could be confirmed by medical experts for every cancer patient within the scope of extensive psychological reports. However, this procedure is generally not necessary. Only if the adjustment disorder significantly differs from that of the average cancer patient, should this condition be diagnosed

in a corresponding psychiatric report and, if applicable, given a higher MdE rating (11).

Tumor-free course represents the changing factor. Just like an initially high MdE value is presumed for every insured based on experience without individual proof, the typical improvement of the condition after 2 and 5 years, respectively, is also accepted as fact.

Deviations from normal course that can be recognized by any physician regardless of his specific medical training need to be verified and assessed by corresponding psychiatric examinations. If such deviations lead to an amount of compensation above the basic ratings, they should be severe enough for the patient to request and follow treatment on a long-term basis. Adjustment disorders that do not legally require treatment are already given a very high basic MdE rating.

Psychiatric experts often fail to realize that the basic MdE already represents a rating within their medical field. [Since, at an early stage, bladder cancer itself does not cause any MdE-relevant functional disorders.] Consequently, when combining "urological" MdE and "psychiatric" MdE, they calculate a higher value as they are not aware of the inherent overlap of the two medical fields.

According to histopathological tumor staging [invasion depth (12) and histological grading (13)], the patient is informed about the diagnostic results. The more aggressive the tumor, the greater is the emotional burden of disease management and its impact on the patient's productivity at the workplace. Additionally, the instillation treatment used for superficial high-grade tumors periodically weakens the patient and increases the degree of functional limitation. In patients with superficial bladder cancer, transurethral resection is the therapy of choice with the following exceptions: Patients with bladder cancer classified as Tis and/or T1 N0 M0 G high grade are immediately cystectomized by some urologists; whereas others perform cystectomy only after the first failure of transurethral resection followed by instillation therapy. Further indications for curative cystectomy are bladder cancer patients with multiple T1 N0 M0 that cannot be removed by transurethral resection, pTis and/or pT1 N0 M0 G high grade.

In patients with muscle-invasive bladder cancer (i.e., >T1, all N, all M), a cystectomy with curative or palliative indication is principally indicated (see also 4.2.2. Loss of the urinary bladder). If this is not possible due to age or contraindications, the psychological functional limitation becomes even more pronounced, as the patient has to cope with the inevitable progression of the disease.

Based on this experience, the insured is rated with staggered basic MdE values (Table 2, Table 3) dependent on the tumor staging and grading because of

Table 2. Basic rating principles for MdE values

Stage	up to 2 years	2-5 years	after 5 years
pT _a N ₀ M ₀ , papilloma	20%	-	-
pT _a pT ₁ N ₀ M ₀ , G low grade	50%	20%	-
pT _{is} pT _a pT ₁ N ₀ M ₀ , G high grade	60%	30%	-
pT ₂ N ₀ M ₀ , G low grade	60%	40%	-
pT ₂ N ₀ M ₀ , G high grade	70%	50%	-
pT ₃ N ₀ M ₀ , G low grade	70%	50%	20%
pT ₃ N ₀ M ₀ , G high grade	80%	60%	30%
pT ₄ N ₀ M ₀ , G high grade all T all N M ₀ , G high grade all T all N M ₁ , G high grade	100%	CR 80% PR 100% unchanged 100%	CR 60% PR 80% unchanged 100%

CR = complete remission PR = partial remission NB: The use of the T category based on histopathological classification (pT) is required. The T category based on clinical classification (cT) is only allowed in patients when tissue for histopathological assessment cannot be gained for whatever reasons.

Table 3. Comparison of different Bladder cancer grading systems from 1973 to 2004 (27, 28, 29, 30 (for review, see 13, 31)

WHO 1973	Malstrom 1987	ISUP/WHO 1998	WHO 2004
Papilloma	Grade 1	Papilloma	Papilloma
Grade 1	Grade 2A	PUNLMP Low-grade carcinoma	PUNLMP Low-grade carcinoma
Grade 2	Grade 2B	High-grade carcinoma	High-grade carcinoma
Grade 3	Grade 3-4	High-grade carcinoma	High-grade carcinoma

the supposed adjustment disorder and the usually occurring treatment-related temporary disorders (14).

Furthermore, treatment and tumor-related secondary conditions need to be rated according to their specific functional limitations.

Such secondary conditions are rated as if they had originated from benign conditions. Cancer can only be comprehensively represented in the MdE system by including the above-mentioned basic MdE.

The MdE is to be determined by taking the overall situation into account. Instead of simply adding up the individual factors, an actual assessment of the overall functional impairment needs to be performed.

All secondary conditions can be objectified and rated according to their specific functional limitations.

4.2. Treatment and tumor-related secondary conditions

The MdE values for treatment and tumor-related secondary conditions are determined without regard to the underlying condition, as if they were the consequence of e.g. an accident or a separate disease.

4.2.1. Loss of a kidney

For tumors located in the upper urinary tract [renal calyx, renal pelvis, ureter], nephroureterectomy is the treatment of choice. Kidney resection may also be indicated for bladder tumors as a secondary condition. This may lead to an indication for nephrectomy of a non-functioning kidney, if the ostium had to be resected together with the intramural portion of the ureter, thus causing reflux or urinary stasis. For a work-related loss of a kidney with a compensating, fully functional remaining kidney, the MdE is 20%. If, for genetic reasons, there was initially only one kidney (solitary kidney) or renal function has failed

completely so that dialysis is required, the MdE is given a 100% rating. For the area in between, the MdE needs to be adapted according to the functional limitation of the remaining kidney (15). The glomerular filtration rate [GFR] and the serum-creatinine level are regarded as measurable functional parameters. The latter is a less precise parameter as it does not increase until there is already considerable renal insufficiency (16). Since there is a defined mathematical relation between these two values according to the formula by Cockcroft and Gault (17) (Figure 2), the more easily calculable serum-creatinine level can be selected, for pragmatic reasons, as the basis of the MdE rating. Although the serum-creatinine level does not increase until about 50% of the renal function is lost, there is no MdE-relevant functional disorder during the early stages of renal insufficiency (18). Following Schonberger, Mehrtens, Valentin (4), this results in the MdE values for renal dysfunction as listed in Table 4. These values are also to be used as reference for the rating of renal insufficiency when both kidneys are present.

4.2.2. Loss of the urinary bladder

Loss of the urinary bladder that requires urinary diversion is given an MdE rating of 60-100%. The same MdE range is intentionally recommended for all techniques of urinary diversion, in order to avoid an assessment of the individual pros and cons by the MdE rating. Among other things, this is meant to prevent a particular technique from being favored due to its higher MdE rating, or patients from being given an advantage or disadvantage due to the available treatment options at a hospital. The lowest value of the range [60%] only applies in a few ideal cases. The possible side effects/functional disorders of urinary diversion listed in Table 5 usually lead to an MdE rating of 80% or, in severe cases, 100%.

As a result, the overall MdE rating of cystectomy patients is always 100% in the first 5 years. With tumors

Table 4. MdE values in case of renal dysfunction (from (4))

Creatinine value mg %	MdE
1.0 – 1.4	0% (No functional impairment)
1.5 – 2.0	20%
2.1 – 2.4	30%
2.5 – 6.9	40%
7.0 – 7.9	70%
8.0 – 14.9	80%
> 14.9	100%

Table 5. Frequency of late complications of urinary diversions following cystectomy (32, 33, 34, 35)

Anastomotic stricture
Diarrhea
Fistula formation
Deficiency of folic acid
Disturbed urinary transport
Urinary tract infection
Herniation
Herniation (requiring treatment)
Hyperchloremic acidosis
Hypochloremic acidosis
Intrapelvic abscess
Ileus
Lymphocele
Maldigestion
Renal dysfunction
Obstipation
Stomal stenosis
Metabolic disorders
Symptomatic reflux
Ureteroileal stricture
Urethral stricture
Urolithiasis
Vaginal prolapse
Deficiency of vitamin B12

$$GFR = \frac{(140 - \text{age}) \times \text{weight (in kilograms)} \times F_G}{\text{serum-creatinine (in mg/dL)} \times 72}$$

Figure 2. Cockcroft-Gault formula for calculating the glomerular filtration rate (GFR) (17). (When serum-creatinine is measured in mg/dL: F_G women = 0.85, F_G men = 1). (When serum-creatinine is measured in $\mu\text{mol/L}$: F_G women = 1.04, F_G men = 1.23; omit the factor 72).

infiltrating perivesical fatty tissue or invading prostate, uterus or vagina without regional lymph node metastasis or distant metastasis (T3 or T4a, N0, M0) and tumors infiltrating pelvic or abdominal wall without regional lymph node metastasis or distant metastasis or any tumor with regional lymph node metastasis and no distant metastasis or any tumor with distant metastasis (T4b, N0, M0 or any T, N1 to N3, M0 or any T, any N, M1) and G high grade following cystectomy, it will never be possible to reduce the MdE rating on a long-term basis. After this period, the compensation may be reduced only at earlier stages and at ideal course.

4.2.3. Recurrent urinary tract infections

Isolated and treatable infections, although symptomatic, are not MdE-relevant. Due to the frequent manipulation of the urinary tract and the changed outflow conditions, close-meshed, recurrent temporary infections or persistent, chronic and treatment-resistant urinary tract infections may manifest themselves. Only these are to be

given a consistently increased MdE rating with respect to increased susceptibility to infections (19).

As long as such infections are asymptomatic, they do not lead to any MdE-relevant functional disorders. If infection-related bladder dysfunction - including functional changes such as an overactive bladder (formerly called urge syndrome) - or renal impairments on the basis of chronic pyelonephritis develop, they are to be rated according to the reference values for bladder dysfunction and renal dysfunction. Urinary tract infections without such organic impact need to be carefully documented. Micturition difficulties and pathological urine constituents are often misinterpreted as sufficient diagnostic criteria for the diagnosis of a urinary tract infection. Patients with these urinary tract conditions usually exhibit pathological urine results. They often complain of pollakiuria, oliguria or imperative urinary urgency, especially because they pay particular attention to urination as a result of the discomfort of their condition. This combination of symptoms and pathological findings must not be classified as a urinary infection. Without microbiological examination and a resistogram, the anamnestic-clinical diagnosis cannot be accepted. Clinical aspects such as fever, lab results and circulatory disorders as well as the length of treatment need to be recorded. This particularly applies to cystectomy patients, since any form of urinary diversion (stoma, pouch, neobladder) leads to contamination ($\neq$ infection) with pathological urine constituents. A functional disorder caused by infection can therefore only be diagnosed once this documentation is available. Such a disorder is to be given an MdE rating between 10% and 40% by using the parameters of the course to specifically state where that value is located within the given range.

4.2.4. Reflux

In organ-preserving treatment regimens following resection, an ostium often gives rise to vesicoureteral reflux. Depending on the surgical technique used in orthotopic bladder replacement, reflux may be unavoidable. If the rating given to urinary diversion, which is recommended to be between 60 and 100%, is intended to be in the lower portion of this range, potentially occurring reflux problems will have to be taken into account. The diagnosis requires a voiding cystourethrogram. A nuclear-medical examination including the calculation of the split clearance is required to assess the course. If the presence of this functional disorder is confirmed, the MdE is rated as shown in Table 6.

4.2.5. Bladder dysfunction

Due to the high recurrence rate of urothelial tumors, regular endoscopic follow-up examinations are indicated, often including repeated transurethral resections and intravesical chemo or immune therapy to potentially reduce recurrence.

Especially repeated, large-scale resections of bladder tumors that extend deep into the bladder tissue may cause cicatrization of the bladder wall, just as much as frequently repeated intravesical chemo or immune therapy does. This may lead to reduced bladder capacity or

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Table 6. MdE values in case of vesicoureteral reflux

Vesicoureteral reflux	MdE
Unilateral, uncomplicated	0 - 10%
Unilateral, complicated	20 - 40%
Bilateral, uncomplicated	0 - 20%
Bilateral, complicated	50 - 80%

Table 7. MdE values in case of bladder dysfunction

Severity of dysfunction	Assessment criteria	MdE
Compensated bladder dysfunction		
	Residual urine zero, capacity of 200 to 500 ml, no reflux, no stasis of the upper urinary tract, no or little incontinence without the necessity of a urine collection device, no urinary tract infection, no concretion	10 - 20%
Sufficiently compensated bladder dysfunction		
	1 to 2 factors increased	20 - 50%
Decompensated bladder dysfunction		
	More than 2 factors increased	50 - 70%
Decompensated with increased secondary damage		
	More than 2 factors increased, additional concomitant diseases occurred due to long-term or intensive decompensation such as renal function impairment, reduction of bladder capacity with advanced bladder wall alterations, low-pressure reflux, pyelonephritic alterations	70 - 90%
Absolute urinary incontinence		70 - 100%
Additional severe renal functional impairment		
		80 - 100%

near the ostia may also lead to surgery-related reflux. Reflux can also give rise to urinary stasis, recurring urinary tract infections in the area of the upper urinary tract and progressive renal insufficiency. Repeated resections and/or intravesical immune or chemo instillation therapy often cause an isolated, sensitive irritation of the nervous fibers of the bladder wall. Patients primarily complain of an overactive bladder (pollakiuria, imperative urinary urgency, nocturia with or without urinary incontinence), but also of voiding problems (Figure 3). It is important to know that these symptoms alone, which may occur in almost any combination, are not necessarily sufficient to diagnose a voiding or storage disorder. Diagnostic classification and objectification is therefore indispensable.

4.2.5.1. Differential diagnosis of bladder dysfunction

The prerequisites for a clear etiological classification and objectification of anamnestic complaints are, besides a subtle general and micturition anamnesis, micturition record, pad test (20), uroflowmetry, residual urine sonography, urethrocytography (contrast radiography of the urethra), micturition cysturethrography and urodynamic examination and/or video-urodynamic examination. Urethrocytography is predominantly used for the functional assessment of the sphincter and the pelvic floor as well as the morphological analysis of the bladder interior. The verification of secondary damage of the upper urinary tract requires a sonography of the upper urinary tract and a nuclear-medical renal function test, if necessary, supplemented by excretory urography. Computer tomography and (functional) magnetic resonance imaging are reserved for special questions.

4.2.5.2. MdE rating

MdE rating is shown in Table 7.

4.2.6. Urethral stricture

An inevitable, typical treatment-related secondary condition following transurethral resection is the development of a symptomatic urethral stricture, which requires a (in the worst case repeated) surgical restoration by urethrotomy ("incision into the urethra"). The patients complain of weak urinary stream, frequent, in some cases painful micturition and post-micturition dribble. This treatment-related condition may be accompanied by urinary tract infections. For diagnosis and documentation, micturition diary, uroflowmetry, residual urine sonography, urethrogram and finally urethroscopy are required. If the urethral stricture leads to bladder dysfunction, it is rated according to the above scheme. If there is no dysfunction, the MdE is rated on the basis of the treatment as shown in Table 8.

4.2.7. Erectile dysfunction

Erectile dysfunction is understood to be the permanent inability to achieve and/or maintain an erection that is sufficient for a satisfactory sexual intercourse (21, 22). The etiology of erectile dysfunction is manifold and often multifactorial. In addition to psychogenic forms, a distinction is made between vascular and nervous lesions as well as mixed forms.

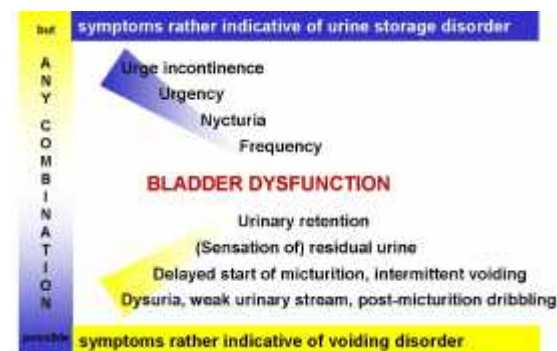


Figure 3. Clinical symptoms of bladder dysfunction.

culminate in a small-capacity bladder (bladder shrinkage) and/or a significant reduction in bladder compliance (flexibility of the bladder) with a consecutive (significant) intravesical pressure increase when the bladder is filling up. In the long-term, cicatrization and increased pressure may trigger or promote bilateral vesicoureterorenal reflux. A required resection via the ureter ostia for tumors located

Table 8. MdE values in case of urethral stricture

Clinical course of urethral stricture	MdE
Occasional dilation with a bougie	10 - 20%
Repeated dilation with a bougie	20 - 30%
Frequent micturition, little post-micturition dribble	10 - 20%
Painful micturition, strong post-micturition dribble	40 - 60%

A relevant erectile dysfunction may develop through several pathological mechanisms as a consequence of compensable diseases, their treatment or accidents covered by insurance.

Vessels may be injured, ligated or constricted e.g. as a result of severe traumas, especially those involving pelvic fractures, or surgical interventions in the pelvis minor such as the radical cystoprostatectomy, which may cause a consecutive vascular erectile dysfunction.

A neurogenic erectile dysfunction may be caused by both damage of the central nervous system (brain, spinal cord) e.g. through craniocerebral traumas, spinal lesions (e.g. paraplegia, spinal canal stenosis due to tumors, treatment-related secondary conditions) and damage of the peripheral nervous system (e.g. intervertebral disc lesions following radical surgeries on the pelvis minor).

Injuries of the peripheral nervous system with relevance to the statutory accident insurance are frequently observed following surgeries on the pelvis minor (cystectomy, prostatectomy, rectal surgeries) or severe pelvic traumas. Erectile dysfunction is stated as an undesirable side effect of some drugs. If such drugs are taken due to a compensable disease, the resulting erectile dysfunction may be regarded as a consequence of an occupational disease or accident.

4.2.7.1. Diagnostics

Erectile dysfunction as a reported symptom cannot be acknowledged as a relevant consequence of an occupational disease or accident. The diagnosis needs to be objectified. Therefore, objectifying tools should be used as early as upon compilation of the case history. These include internationally approved questionnaires such as the International Index of Erectile Function (IIEF) (23) or the questions of the American Sexual Encounter Profile (SEP), which have been used in many studies (e.g. 24). Furthermore, free testosterone (value in the morning), total testosterone as well as SHBG (sex hormone binding globulin) levels should be determined.

Especially for expert reports, non-invasive or minimally invasive methods should preferably be applied to objectify the erectile dysfunction, such as e.g. the erection provocation by exposing the patient to visual stimuli while using an objective erection measurement system (Rigiscan®) without or with the administration of an oral PDE-5 inhibitor (25) or the measurement of the erection ("tumescence measurement") (26) over 2 nights. A rigidity at the top of the cavernous body (near the coronary sulcus) amounting to at least 60% and persisting for 10 minutes may be regarded as an indicator for normal somatic erectile dysfunction.

The Doppler sonography of the profound penile arteries in combination with the injection of vasoactive medication into the cavernous body or the radiological imaging of penile vessels or the cavernous body are considered as more invasive methods, which may be indicated in specific individual cases.

4.2.7.2. Expert assessment and MdE rating

Erectile dysfunction causes no direct functional loss in working life. Nevertheless, insured having a manifest erectile dysfunction and thus experiencing a high degree of psychological stress are limited in their ability to cope with pressure and their fitness for work, since they suffer from depressive mood. Depending on the degree of psychological stress, an MdE of up to 20% is generally indicated in the literature for objectifiable erectile dysfunction. Should the expert investigation show the suspicion that more significant adjustment disorder exists in specific individual cases (e.g. adolescence, desire for a child, lack of steady relationship, failure of the relationship due to the erectile dysfunction), an additional psychiatric report is recommended (4).

The essential prerequisite for the acknowledgement of an individual MdE in case of erectile dysfunction is the objectification of the disorder, the evaluation of the causality and the existing psychological stress. The anamnestic clarification of a sexual dysfunction possibly existing prior to the compensable event is of special importance.

5. SUMMARY

The MdE values described in this article are empirical values, which have been repeatedly confirmed by medical experts, accident insurance providers and courts of law and accepted by the affected individuals. Due to this acceptance, they have proven to be correct and thus socially reasonable. Taking them as a basis ensures the equal treatment of all insured. If any medical expert intends to deviate from them, he shall substantiate this decision carefully, plausibly and comprehensively to all parties (4). The described complex nature of the possible treatment and tumor-related secondary conditions but also the delimitation from inevitable urological functional disorders that are not associated with the occupational disease suggest that the overall MdE rating can only be given by urologists who are experienced in the assessment of occupational diseases and accidents.

All MdE ratings, determined in strict compliance with the above-described criteria, have so far been confirmed by German social courts.

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