

Men's sexual health disorders after **pelvis** trauma

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It has been established that pelvic injury in men, especially at symphysis pubis and perineum, may result in sexual disorder function – impotence, sexual disorders and erectile dysfunction (ED). This issue, however, is not broadly covered in native scientific literature. In foreign articles the information of in-depth investigation of the problem is also scarce. Moreover the development of post-traumatic impotence demands peculiar attention since sexual relationships influence the status of the man in the society.

Impotence following pelvic injury in the last 30 years appeared in 5-20%; in recent years the number of patients with this pathology increased by 10-20 times. In our opinion, this is due to the fact of a bigger concern of men about their health, including sexual function and is also due to more proper statistics. The development of sexopathological service in the Republic of Belarus, introducing contemporary methods of impotence diagnostics, higher effectiveness of medical and surgical treatment result in more frequent medical assistance for patients.

Pathogenetic reasons of the impotence at pelvic injuries can be represented as follows:

- ◆ vascular disorders of penis in inferior fascia of urogenital diaphragm, internal pudendal artery (the brunch of internal iliac artery), which is the main source of penile blood circulation;
- ◆ affection of dorsal artery in penis;
- ◆ penile vascular occlusion due to edema;
- ◆ affection of parasympathetic region of caudal region of the spinal cord (S2-S2 segments);

- ◆ trauma of sacral nerves stretched under symphysis pubis towards cavernous body vessels;
- ◆ compression of penile dorsal nerve at its base or at avulsion, fracture of ischial bone, compression in ischioanal fossa;
- ◆ sacral plexus or spinal cord affection at sacrum or spine fracture;
- ◆ posttraumatic psycho-emotional stress.

Vast pelvic fractures and ruptures with neurovascular affection, haematomas, tear of tissues can also be the reasons for impotence.

Complicated impotence pathogenesis demands deep differential diagnostics between organic and functional character of copulative ability disorders. By different authors, in the structure of this pathology 60-80% are organic dysfunctions, 20-40% are functional ones. It is defined that at pelvic trauma ED develops in 8% of cases, at operative invasions in small pelvis – in 13%.

Steady impotence is marked at those having had an injury of penile vessels and nerves. It more often appears at affection of urethra, in its posterior

region. This manifests of the role of local affection in the region of inferior fascia of urogenital diaphragm in consequent appearance of impotence; affections of posterior region of urethra are just indirect indicator for local injury of nerves and vessels.

Considering that erection is a complicated psychological, hormonal and neurovascular phenomenon, it is sometimes hard to define the etiology of

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men's impotence. Delicacy of communication with a patient is also an obstacle in investigating this pathology. Impossibility of long-term monitoring of patients and difficulties while questioning make it necessary to look for simple economically justified methods of screening. Questioning method meets those requirements. After the data obtained had been coincided with the results of personal interrogation and investigation, the reliability, reproducibility, sensitivity, specificity of the method and correlative link with the results of investigation were detected.

The aim of this work is retrospective analysis of the study of erectile function of men who had pelvic injuries.

By means of questioning, sexual dysfunction of 108 men in 1 (36 persons – 33.3%), 3 (26 – 24.1%), 5 (24 – 22.2%) and 7 (22 persons – 20.4%) years after pelvic injury was investigated. There were 17.6% of victims; Among those below 19 years old, 20-29 years old – 12.9%, 30-39 years old – 17.6%, 40-49 years old – 25.9%, 50-59 years old – 13.9%, 60 > - 12.1%. The largest number of patients were below the age of 50,

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Sexual disorders had been detected in 42 (38.9%) persons out of 108, mainly amongst those aged 30 and above. In 15.7% of elderly patients the disorders were caused by age hormonal dysfunction (2 persons), burdened atherosclerosis of lower extremities peripheral vessels (3 persons), sugar diabetes (2 persons) inflammatory disease of urethra and prostate in (1 person).

On the basis of present classification of sexual disorder, two groups of patients were marked out those whose ED in 1 and 3 years had organic and functional character (26 persons – 24.1%) and those whose ED in 5 and 7 years had mainly organic character (16 persons – 14.8%).

Diagnostics of sexual disorder in patients with pelvic injuries began with the investigation of complaints, collection of life history, sexual anamnesis, subjective evaluation of sexual manifestation with the help of a questionnaire.

On the basis of inspection of patients and analysis of multipurpose questionnaire consisting of 24 questions, an algorithm of interrogation of patients about sexual dysfunctions had been developed, including the following information:

- ◆ degree of sexual desire;
- ◆ quality of erection;
- ◆ frequency of coitus;
- ◆ quality of orgasm;
- ◆ Sexual satisfaction.

According to modern classification that displays specific gravity (in percents) of the four components of men's sexuality manifestation, the following ED variants were defined:

Neurohumoral constituent, along with traumatic factor, was detected in 6 (14.3%) elderly people (60 >); it was caused by involuntal decrease of sexual activity. In 2 (4.8%) persons constitutional features were caused by delayed puberty and delayed sexual desire. Such disorders had been detected mainly in persons with congenital constitutional-

endocrine features, dysraphic status and susceptibility to reactive state. Presumably, in these patients there was a neurohumoral function mismatch due to the disturbance of hypophysis-gonad system with sexual desire delay.

Personal features in much define functional state of a person in health and in disease. ED as reaction to stress was detected in 7 (16.7%) persons. Many authors believe that erectile function decrease following pelvic injury depends on many factors that form specific features of a personality:

- ◆ tolerance to stress;
- ◆ self-evaluation (identification) of a person;
- ◆ sense of personal dependence on others;
- ◆ peculiarities of communication with the others;
- ◆ Communication experience.

The main importance at ED is vegetative nervous system – parasympathetic phenomenon with segmental representing in S2-S4 segments of the spinal cord, the function of which may be affected due to mechanical traumatic effect on nerve tissue microstructure of spinal the cord caudal region. Erective dysfunction was detected in 19 (45.2%) persons and manifested in decrease of sexual desire, erection (2 persons), change in coitus duration, orgasm quality which might be a consequence of dysgemic disorder in penile arteries and veins. In these cases the manifestation of sexual dys-

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function depended on the type of an injury. The most significant pathology was defined in “C” type with full posterior semi-ring rupture (5 persons – 11.9%), in 2 patients (below 35 years old) pollutions presented after small

portions of alcohol intake at strong psycho-emotional stress. In "B" type (8 persons – 19%) the sexual dysfunction was less manifested. In "A" type (6 persons – 14.3%) the patients had an erection, long coitus duration but the orgasm quality was much worse.

Ejaculatory constituent was detected in 10 (23.8%) persons. It manifested in significant erection decrease in long coitus duration and orgasm quality.

Thus, sexual function disorder of organic and functional genesis was detected in 38.9% of patients in 1, 3, 5 and 7 years following injury. According to present classification, pathogenetic mechanisms of impotence were caused by neurohumoral, psychological traumatic factors, erectile and ejaculation dysfunction. The research conducted will contribute to the development of target programs of medical rehabilitation of patients.

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