ETRICAL AND DIAGNOSTIC DIFFICULTIES OF THE COHABITATION TESTS IN THE FORENSIC EXPERTISE

Dan Perju-Dumbravă*, Iuliu Fulga***, Ovidiu Chiroban*, Diana Bulgaru-Iliescu**

Abstract
The determination of the sexual cohabitation capacity may be required by the legal authorities in cases where persons suspected of committing sexual crimes declare themselves as being impotent, alleging their preexisting sexual impotence. In such cases it is compulsory to scientifically evaluate the existence or absence of the sexual impotence at the time of the presumed sexual offense. In this sense, various diagnostic tests are used, the intracavernous injection of papaverine (ICIP) being accepted by the judiciary system in Romania. During our forensic activity carried out at the Institute of Legal Medicine Cluj-Napoca we have applied this diagnostic test to a number of four male inmates in Gherla Penitentiary. The results obtained allowed us to evaluate the status of the inmates’ impotence at the time we had performed those tests. However, the ICIP, as assessor of the cohabitation capacity in men raises numerous diagnostic and nonetheless ethical issues. Among the most significant we might mention the following: difficulties in assessing the state of impotence depending upon the degree of the erection, the association of the test with sexual stimuli, the value of test according to the specific type of impotence diagnosed, the psychiatric aspect regarding the possibility of existence of a degree of needle phobia, the risk of complications.

Keywords: cohabitation tests, papaverine, sexual impotence, bioethics.

Corresponding Author - Iuliu Fulga: fulgaiuliu@yahoo.com

*Forensic Discipline, UMF “Iuliu Hațieganu” Cluj, România
** Director IML Iași, România
*** Forensic Discipline, UMF “Dunărea de Jos” Galați, România
**Introduction**

In the judiciary practice, judges often need to solve cases implying medical and biological issues, concerning living people. These persons may be either victims, or on the contrary, defendants. Thus, under Article 116 of the Romanian Criminal Procedure Code [1], while for the clarification of facts or circumstances of the case, in order to establish the truth, there is the need for an expert’s knowledge. As a consequence, the criminal investigation authority or the Court, upon request or by its own will, may order to perform an expertise.

In this way, the judiciary authorities may require the establishment of the cohabitation capacity, in cases where persons suspected of having committed sexual offenses declare themselves innocent, pleading for sexual impotence. In assessing such cases we can examine both the organic and psychological factors that can lead to sexual dynamic disturbances, such as erectile dysfunction, libido disorders, abnormal ejaculation or orgasm disorders [2]. In such cases, the forensic expertise should assess the existence of the sexual impotence at the moment of committing the presumed offense. In this sense, we can use various diagnostic tests, among which the intracavernous injection of papaverine (ICIP) which is accepted by the judiciary system in Romania, the process being under supervision of a doctor from a Legal Medicine Department.

In 1892, Virag [3] was the first to administer intracavernous injections of papaverine hydrochloride in the course of revascularization surgery and found vigorous erections to develop. Papaverine hydrochloride, a spasmylytic containing opium alkaloid, reduces the smooth-muscle tension, acts as vasodilator and counteracts the vasoconstrictor effect of adrenaline [4]. Therefore, local doses of papaverine cause cavernous smooth muscles to relax and arteries to dilate [5].

Within the Institute of Legal Medicine Cluj-Napoca, we have performed a total of four such expertises, upon the request of the Court, during the period of 2009-2012. The results obtained, materialized in the conclusions of our forensic expertises, have helped to solve these cases in due time. However, we felt the need to draw attention upon some ethical and especially some diagnostic issues concerning these examinations.

**Material and method**

We have performed 4 such diagnostic tests in men aged between 31 and 57, who claimed they were impotent at the time of the presumed sexual offense. They were in detention at Gherla Penitentiary, and the offense was rape. All tests were performed in the Department of Urology at the local Military Hospital in Cluj-Napoca, in collaboration with an urologist and an anesthesiologist. We used vials of 4% Papaverine Hydrochloride.

We took the patients’ informed consent after we had previously explained the procedure they had to undergo and the risks involved. After disinfecting the area with iodine solution, the penis root was compressed and the solution was injected on the dorsolateral face of the penis in corpus cavernosum. The injections were performed with 16/0,5 mm needles and an 80 mg papaverine hydrochloride dose. After injection, the penis was vigorously massaged for 15
seconds in order to allow the uniform distribution of the active substance on both corpora cavernosa. The patients remained in the backward position for 20 minutes after the injection. They were asked to take the orthostatic position in order to measure the angle between the vertical axis and the erect penis, using a protractor. After having recorded the results, they continued to remain for 6 hours under specialized supervision in order to forestall any complications or side effects.

For the assessment of the mental status, we performed a forensic psychiatric expertise which in all cases included a psychological examination. Furthermore, in order to have a complete picture of the patients’ medical history, we requested the medical records from their general practitioners and also a social survey of the patients.

Results

The response [6] to ICIP was interpreted as follows:

A. Negative, when no penile change (no response) or a less than 60° angle was observed.
B. Positive, when the penis formed with the vertical axis an angle of 90° in the orthostatic position.
C. Intermediate, when the penis formed an angle between 60° and 90°.

Therefore, of the four patients tested, three developed a negative response, meaning that no penile change had occurred. One patient developed penile changes of 75°. The test results in these patients were interpreted as intermediate (one case), and negative (three cases).

Discussion & Conclusion

Due to its erectogen effects, ICIP plays an important role in both the diagnosis and therapy of impotence [7]. Moreover, we have been specifically asked by the Courts to perform this type of expertise, the informed consent having been obtained while carrying out the expertise. The reported results were sent to the Courts, within the conclusions of our forensic expertises, noting that they were reflecting the status of the patient during the expertise, and that we were unable to adjudicate with certainty upon their cohabitation capacity at the time of the presumed sexual offense.

Therefore, a positive or intermediate response concluded the possibility of existence of the cohabitation capacity retroactively, respectively for the time of committing the sexual offense, due to the fact that it had occurred prior to the expertise.

The first ethical issue refers to the psychological impact related to the conditions of the test. Although the procedure itself is relatively painless, using small needles, we cannot deny the occurrence of certain psychological inconveniences. Thus, the patients were injected a pharmaceutical drug into the penis, in the presence of the forensic pathologist, the prison physician, the urologist, the anesthesiologist, the medical nurse and the prison guards, elements that lead to an evident lack of privacy and relaxation, required to perform a normal sexual act.

Another aspect refers to the fact that some patients might say they suffer from needle phobia. But ICIP necessarily implies the controlling and visualization of the medical procedure and the use of needles in this case we are absolutely compulsory.

Other tests used in the evaluation of impotence in men, include the
monitoring of nocturnal penile tumescence (test of unverified relevance and obsolete), the penile arteriography, the test of artificial erection by mechanical stimulation of the penis with various devices [6]. Nonetheless, some involve high costs (the monitoring of nocturnal penile tumescence) and others are too invasive (the test of artificial erection combined with dynamic cavemosonography). Thus ICIP proves to be a reliable test, implying very low costs, the degree of invasiveness being minimal.

Informed consent is the expression of respect for a person’s autonomy and obtaining the consent is mandatory in medical practice, regardless the type of action to be performed (diagnostic /therapeutic procedures, clinical studies) [8]. The informed consent issues had been previously solved by explaining the patients the procedure they had to undergo and the risks it involved. All patients agreed to sign the informed consent and proved an exemplary compliance, especially when the expertise had been actually asked by the patients themselves in order to prove their innocence.

The medical literature [7] mentions that most patients with sexual dysfunction noticed a higher quality of erection when ICIP was associated with sexual stimulation, usually from a partner, than the mere erection obtained only by self-testing. This observation suggested that endogenous neurotransmitters and the local vasoactive substances issued by sexual stimulation have an additive effect with ICIP [7]. During the tests we performed, we have not associated any sexual stimulation. This would have raised difficult questions regarding the type of sexual stimulation, whether it had to be heterosexual or homosexual, the method of presentation and duration of exposure. In this way, there have been cited [9] cases of rapists evaluation in which the sexual materials submitted were both video and printed, the duration of exposure had been between 5 and 10 minutes.

For the first forensic expertise, we aimed to obtain a mental relaxation, by the administration of a minor tranquilizer, but subsequently we reconsidered that, due to its potential to antagonize the test itself and thus the denial of the test’s validity by the law attorneys.

The systemic complications of ICIP are rare, but we could mention the pulmonary embolism, hypotension, and liver disorders [7].

On the other hand, the local complications are more common. Among these we could recall the poor technique, respectively the iatrogenic subcutaneous or urethral injection, the corpus cavernosum fibrosis, prolonged and painful erections lasting more than 4 hours, priapism, subsequent iatrogenic impotence (very rare - only 2 cases found in literature [6]). However these adverse local effects tend to be reversible, the prolonged erection can be treated by draining the blood from corpus cavernosum or by administering injections of metaraminol.

This test, entailing all the risks mentioned above should be performed only by specialized medical personnel, able to counteract its side effects, which is the reason why we chose as collaborators an urologist and an anesthesiologist, and we decided the compulsory hospitalization of 6 hours following the procedure. Accordingly, this evaluation would normally be an inconvenience for most patients, due to
its duration, but since the subjects examined were inmates, the problem was of little or no significance.

Another issue relates to the diagnostic value of ICIP depending on the specific type of determined sexual impotence. Impotencia coeundi can be classified into 3 categories: neurogenic-psychogenic, endocrine and vascular [4]. Foreign authors reported that ICIP could induce erections in both neurogenic-psychogenic and vascular erectile disorders [4], while others [6] stated that ICIP’s effects were relevant on neurogenic-psychogenic and endocrine disorders. However, papaverine is known to have effects on all types of erectile dysfunctions.

The aspects concerning the technique also raised some questions. The patients’ position while assessing the penile response was one of the issues. Since the orthostatic position is closer to the position adopted during intercourse by most Western men [6], rather than the backward position, it has been proved that this position is preferable to assess the ICIP’s response.

The dose of 80 mg of papaverine we have used was the most frequently mentioned in the literature. The response to ICIP could also be quantified, in addition to measuring the angle formed by the erect penis with the vertical axis, by the modifications in terms of length, circumference and penile rigidity [10].

In conclusion, the forensic expertise concerning the sexual cohabitation capacity is particularly useful in better assessing sexual crimes. Consequently, in cases where the investigators have doubts concerning rapes, the procreation capacity, or divorces based on the grounds of sexual dysfunction, the use of ICIP by the Courts tends to be very helpful, allowing them to be performed with low costs.

The ethical issues of ICIP depend very much on the physician’s ability to explain the patient the test methodology and its benefits, and therefore his capacity to realize the value of the test in Court.

Ethical aspects also include the private nature of the sexual act and the element of surveillance, the psychiatric aspects of stress and the possible impairment of the libido, the social survey and inquiry that invades the neighboring environment, the psychiatric questions regarding their private sexual life.

Nevertheless, an important element was the fact that the patients had the possibility to choose this method as a way to prove their innocence, and the fact that this expertise helped the social and moral justice, the patient being concerned about the statute of a pariah in a society in which the mass-media presents such cases vividly and exhaustively. Completing this test with a forensic expertise leads to a better interpretation of the case and to the elimination of the psychogenic causes of impotence.

The difficulties related to the interpretation of the test also depend on the time passed since the alleged sexual offense. A positive result proves the existence of potentia coeundi, while a negative result in the conditions of perfect monitoring, excludes it, as long as it is performed in a relative period of time after the presumed offense. The intermediate result would require a repetition of the test, in combination with stimulants materials.
References