2023
A new decade for social changes

Technium
Social Sciences
The procedure followed for the legal medical examination

Anane Iuliana
Independent Researcher

Abstract. The medical expertise activity is a necessary element and in close connection with the legal world, through legal medicine the possibility is realized through the application of justice in all situations in which it is applied, succeeding in accurately identifying a different aggressions applied to the victim. The examination must include the circumstances in which the act took place, the study of the person's body as well as the clothes worn at the time of the act, also the reasons and objectives of the examination, such as the examination of traumas, sexual assaults. A medico-legal specialist can also deduce classify the traumatic agent used, such as a blunt object, sharp bladed object, sharp point. The expert has the ability to determine the mechanism of injury based on the agent traumatic used. In the case in which the Forensic expert performs survey on victim’s sexual assault, the forensic doctor must act as urgently as possible to take the biological samples, among the obligationsa doctor has to establish the sexual maturity of the person, and to check the presence of different traumas that can be observed on the genital organ. Examination applied to the male individual being the establishment of the sexual capacity for fecundation, the inability to copulation it may be formula on the base of different factors, such as: the mental state due to fears or nervousness or due to various causes.

Keywords. trauma, victim, examination, code, aggressor, medico-legal

1. General aspects looking the forensic examination
The procedure of examination it is made just in case of some circumstances, in legal practice, the need to solve medico-biological problems often arises in cases of which the object of the examination is the living person. These people can be victims of crimes as well as by accuse or defendants.

For the most part, by making such examinations or findings, they are established retroactively the important elements of evidence looking circumstances the events. In the other cases, conclusions expertise substantiates a classification legally a fact. In consequence, issues medico-legal expertise per person, must be carefully treated by the criminal investigation bodies. Practitioners who represent these bodies are obliged to know in which cases and how they are requested procedurally correct these types of statements or findings and how they may be used their results for investigation.

The expertise made after examination it based on the following items:

- The data of additional examinations (radiographs, ultrasounds, tomographic examinations, examinations of laboratory)
- The data from the medical documentation made available by the criminal prosecution bodies or instance (files medical, certificates medical, sheets of observation, notes of medical reports)
The times of the medico-legal expertise per person vary depending on the specifics of the concrete case and objectives of the judicial expertise. The examination will include the next steps:

1. Analysis of the preliminary data regarding the circumstances of the occurrence of the act. Preliminary data can be communicated to the expert verbally by the expert person, in writing by the bodies of follow criminal, through filling out the chapter "Historic" from orderly through which it request the performance of the expertise or may come from the medical documentation. The information obtained is recorded in the medico-legal report specifying the source.

2. Examination of the expert's body. The expert must perform a complete and objective examination of the person, being obliged to document the injuries and changes found through description, photography or other methods.

3. Examining the clothing, in the case of detecting defects or biological traces, can have a guiding role for establishing the mechanism of injury production.

4. Additional exams. In order to correctly solve the expert objectives formulated by the criminal investigation bodies or the court, it is sometimes necessary to establish the diagnosis by doctors from other fields, as well as to perform additional laboratory examinations: radiological, serological, toxicological.

5. Preparation of the legal medical document. Like other types of expertise, the medico-legal documents drawn up after the examination of persons have three main component parts: the introductory part, the descriptive part, the synthesis part. In the introductory part, all the data regarding the expert, the reasons for the performance are recorded. In the descriptive part, all the data obtained during the examination are documented. In the summary part, the expert formulates the conclusions in the form of answers to the questions.¹

The reasons and objectives of the medico-legal examination of living persons can be systematized and presented in the following way:

1. Expertise of mechanical injuries in order to ascertain the presence, morphological character and degree of bodily injury.

2. Expertise of sexual crimes to establish the sexual relationship and bodily injuries (in case of rape), establishing the signs of debauchery of minors.

3. Examination of sexual conditions: determination of sex, sexual maturity, reproductive capacity, diagnosis of virginity, pregnancy, recent birth, abortion, venereal contamination and AIDS.

4. Expertise of the person's state of health, simulation, dissimulation, aggravation, artificial diseases and self-mutilation.

5. Other types of expertise: ascertaining general and professional incapacity for work, determining age, establishing the state of intoxication, assessing the identity of the person, confirming/excluding paternity and maternity (filiation).

The examination of the person usually takes place in the medico-legal outpatient clinic, polyclinics and less often in stationary conditions or in other acceptable places for this purpose. The suspect of committing the crime is examined only in the presence of the criminal investigation officer or the prosecutor, and minor children - in the presence of relatives or guardians (pedagogue, psychologist). The examination of persons at home is admitted only by the written decision of the legal authorities and only in exceptional cases. In some cases, people can be examined in the office of the prosecutor, the criminal investigation officer, in the court.

¹ https://www.slideshare.net/CostelBucur/medicina-legala141012101714conversiongate02
or in the places of detention. The purpose of each examination is to detect and fix bodily injuries or traces that record the crime. In the immediate absence of the respective person, the medico-legal expertise can be carried out based on the medical documents (if any).

The medico-legal expertise of the person is carried out in the form of a medical examination, in accordance with the respective regulations. It is obligatory to identify the person examined based on the identity card or other official document (with photo)\(^2\), the data of which are recorded in the medico-legal report. In certain cases, in addition to the examination of the person, other medical specialists are consulted or the person is recommended to be hospitalized for clinical and paraclinical investigations. The managers of the medical and sanitary institutions are obliged to contribute, and the medical specialists to give the necessary consultations, to carry out clinical and paraclinical examinations at the request of the coroner. The aggravation of the person's health due to the provision of insufficient medical aid following bodily injuries is assessed in the commission, with the participation of clinical specialists from the respective branch.

Any medico-legal examination of the person requires: familiarization with the circumstances of the event, studying the medical documents, taking the medical history, the actual medical examination, carrying out special investigation methods, drawing up conclusions and drafting the medico-legal report. The description of bodily injuries in living persons is similar to that previously indicated for the research on the corpse.\(^3\)

2. Physical examination of the person
2.1. Examination of cases of beating and injury to bodily integrity
The need for a medico-legal examination in cases of hitting and injury to bodily integrity or health emerges from the text of the corresponding articles of the Criminal Code.

In cases of personal trauma caused by external environmental factors, the judicial bodies\(^4\) are interested in the medico-legal solution of some aspects such as: the reality of the bodily injury, the location of the morphological characteristics, the age, the mechanism of injury production.

In some aspects, the medico-legal examination of injured persons differs from the examinations of corpses by the following elements: the appearance of traumatic injuries on the body of a living person is changed by medical manipulations or by healing processes and during the examination of persons, the forensic doctor cannot use all the methods of examination of the lesion, which are usually used in the examination on the corpse.

Some of the most important issues for judicial bodies are establishing the reality and seriousness of the bodily injury. The Penal Code provides different punishments for the perpetrators of these crimes depending on the severity of the bodily harm caused to the victim and the intention. Determining the seriousness of the bodily injury falls under the attributions of the medico-legal experts. In such cases, the legal classification of the facts depends on the results of the medico-legal expertise, which implies a great responsibility on the part of the medico-legal experts.\(^5\)

\(^3\) Gheorghe Baciu, *Medico-Legal Expertise of the Corpse and the Person*, Medicina Editorial-Polygraphic Center, Chisinau, 2008
By consulting the Criminal Code, we can uncover a more in-depth understanding of the circumstances that produce these sanctions on the defendant, thus we can observe: art. 193 CP Hitting or other violence, art. 194 PC Bodily Injury, art. 196 CP Bodily injury due to negligence.

According to art. 193, titled Hitting or other violence, injuries that cause suffering are highlighted, they are punishable according to the law, with imprisonment from 3 years to 2 years or with a fine. If this action causes traumatic injuries or damages an individual's health and requires medical care for a maximum of 90 days, according to the law, the penalty is imprisonment from 6 months to 5 years. The criminal action being able to be initiated by prior complaint of the injured person.

Art. 194, provides for Bodily Injury and consists of the deed provided for in art. 193 that caused consequences such as: disability, serious and permanent aesthetic injuries, abortion, endangering personal life, injuries that require more than 90 days of medical care, the law punishes this act with imprisonment from 2 to 7 years.

Art. 196. Bodily injury due to negligence, provides for the deed provided for in art 193, committed due to negligence by an individual under the influence of alcohol or under the influence of narcotic substances, or is engaged in an activity which itself consists of a crime punishable by imprisonment of in 3 months at a 1 or with a fine.

When the deed provided for in article 194, paragraph 1, committed through fault, is punished with imprisonment from 6 months to 2 years or with a fine.

If the act provided for in paragraph 2 is committed as a result of non-compliance with the legal provisions or the measures provided for the fulfillment of a profession or trade, the law provides for a prison sentence from 6 months to 3 years or a fine.

If the elements provided for in paragraphs 1-3 have occurred on several people, the duration of the punishment is increased by one third.\(^6\)

**Classification of traumatic agents**

In legal medicine, there are several categories of traumatic agents, among them will be listed:

1. Mechanical traumatic agents:
   - Blunt bodies, which cause contusions without cutting or bleeding, they are divided into:
     - depending on the shape of the impact surface:
       a) blunt objects with an irregular surface
       b) flat objects with flat surfaces and straight edges
     - depending on the size of the contact surface:
       a) blunt objects with a small surface (under 16 cm)
       b) blunt objects with a large surface (over 16 cm)
   - Objects with sharp points or blades
     a) Sharp objects with one or more sharp points (nail, screwdriver, needle, fork)
     b) Cutting objects, with one or more sharp blades (blade, razor)
     c) Cutting-stabbing objects with a sharp point and blade (knife, bayonet, dagger, kitchen knife)
     d) Cutting-splitting objects with a sharp blade and a massive body (axe, cleaver, shovel)

2. Biological traumatic agents, such as injuries caused by animals.

---

3. The projects, characterized by their small size, but with high travel speed.

**Ways of formation of injuries by means of traumatic agents**

The mechanisms through which traumatic injuries can occur through traumatic agents are the following:

- **Hitting.** This mechanism implies a dynamic and short-term action of the blunt object in motion on the human body. The shorter the duration of the object's action, the greater the kinetic energy transmitted to the body and, respectively, the lesional volume, because the offending object partially transmits its kinetic energy. At the place of application of force, various injuries are formed, the nature of which is determined by the amount of force, the direction of the blow, the shape and dimensions of the object's surface, the properties and thickness of the clothes, the anatomical structural peculiarities of the traumatized region of the body, as well as other traumatizing factors. As a result of the action of a blunt object, a forced movement of liquid occurs in tissues and vessels, which forms a shock wave, directed from the center of the blow to the periphery. This wave generates breaks in cell membranes, septa, and vessels.

- **Friction** is a superficial interaction between the surface of the blunt object and the human body. The traumatic object and the human body can be in motion both isolated and simultaneously. Through this mechanism of action, superficial injuries occur more frequently.

- **Cut injuries,** the formation mechanism of cut wounds consists in the sliding and compressing movement of the sharp instrument on the surface of the body. The depth of the wound depends, to a large extent, on the force of compression and the degree of sharpness or dullness of the cutting tool. When the tool acts perpendicularly, the cut wound is characterized by a spindle shape, perfectly regular edges, linear direction. Its bottom is smooth, without bridges, tissue, and the ends have the shape of a sharp angle in the initial place, the wound is deeper than in the final point, having as a continuation a superficial incision in the shape of a tail. The hairs are sectioned at the same level as the skin. As a rule, the length of the wound exceeds its width and depth.

- **Stinging injuries,** the mechanism of action of the stinging objects consists in the penetration and removal of tissues in an eccentric direction. A wound is formed with a small entrance hole, a relatively large wound channel and, rarely, an exit hole. In some cases, their shape and appearance are similar to gunshot wounds. Sharp instruments with a rusty surface can skin and stain the skin around the entry hole, forming rings of skinning and scraping similar to those at the edges of gunshot wounds. The main differential sign consists in the lack of tissue defect in puncture wounds, the edges of which come together completely. Punctured wounds can be life-threatening, as they are often accompanied by damage to internal organs and major vessels, resulting in profuse bleeding. At the same time, some lesions do not leave enough external signs, presenting certain deficiencies in their diagnosis.

---

7 GC Curca, Valentin Iftenie, *Legal Medicine Course support*, University of Bucharest Faculty of Law, 2013
8 Gheorghe Baciu, *Mechanical injuries in the medico-legal aspect*, Medicina Editorial-Polygraphic Center, Chisinau, 2006
9 Gheorghe Baciu, *Mechanical injuries in the medico-legal aspect*, Medicina Editorial-Polygraphic Center, Chisinau, 2006
10 Gheorghe Baciu, *Mechanical trauma in the medico-legal aspect*, Medicina Editorial-Polygraphic Center, Chisinau, 2006
11 Gheorghe Baciu, *Mechanical trauma in the medico-legal aspect*, Medicina Editorial-Polygraphic Center, Chisinau, 2006
- Stab-cut injuries, the mechanism of action of stabbing-cutting objects consists in the penetration instrument in a longitudinal way, with removal and sectioning of tissues with the edge blades. So it form a wound pricked-cut, which has entrance hole, injury channel, and sometimes and exit hole.

**The character lesion**

Blunt injuries can be represented by a large spectrum of mechanical injuries, primary: bleeding, excoriations, contusions, bone fractures, dislocations, lacerations and crushing of organs internal, depending on the character of the traumatic object and its mechanism of action, the type also varies the injury.

Blood spills can be traumatic and pathological and are represented by ecchymoses, hematomas and diffuse hemorrhages. They can occur both at the place of the application of force and at a distance. depending on the depth of localization, there are superficial effusions (ecchymoses), deep (hematomas) and very deep (hemorrhages in cavities or internal organs).

The excoriation or a bruise represents a disturbance of the integrity of the epidermis or epithelium of the mucosa. The mechanism of producing the excoriation consists in the friction associated with compression (or hitting) by a blunt object with an irregular surface or a sharp object on the surface of the skin or mucous membrane. Deep excoriation affects the papillary layer of the dermis, damaging the blood and lymphatic vessels. Thus, excoriation is produced by friction, hitting, compression or by combining these mechanisms. Excoriations indicate the existence of mechanical traumatic action and the place of application of force. The evolution of the excoriation allows to establish its age. As a rule, the number of excoriations coincides with the number of blows. based on the morphological character of the excoriations, the particularities can be restored (shape, dimensions, character of the action surface)\(^{12}\)

Ecchymosis, which is also known as a bruise, is an elementary traumatic injury, which presents itself in the form of a well-defined coloration, initially reddish, but which changes over time. Ecchymosis occurs due to post-traumatic ruptures of small blood vessels in the area of action of the traumatic agent, the age of the ecchymosis is represented by the color changes it undergoes, initially reddish, in a few hours it becomes bluish or bluish-purple (color that persists 2-3 days), then brownish (3-7 days), greenish, and finally yellowish.

The hematoma presents itself as a well-defined, initially reddish-purple color that is produced by the accumulation of blood following the post-traumatic rupture of blood vessels of a larger caliber compared to those responsible for the formation of ecchymoses, indicating a more violent trauma. The establishment of age is similar to ecchymosis in terms of going through the stages but in a longer time due to the increased amount of accumulated blood.

Depending on the size, small, medium and large hematomas are distinguished, unlike ecchymoses, superficial hematomas can induce a state of shock putting the person's life in danger, which from a legal point of view can be interpreted as serious bodily injury or even attempted murder.

The wound, also known as a wound, is characterized by the destruction of the layers of the skin, wounds can be classified according to several criteria:

- Depending on the depth:
  1. Superficial wounds, affect only the skin
  2. Deep Wounds:

\(^{12}\)Gheorghe Baciu, *Mechanical injuries in the medico-legal aspect*, Medicina Editorial-Polygraphic Center, Chisinau, 2006
a) Penetrative
b) Non-penetrative
• Depending on the severity:
  1. Easy
  2. Serious, evolving with complications
  3. Very serious, which, over time, will generate infirmity
• Depending on the evolution:
  1. Simple, it heals without therapeutic assistance
  2. Complicated, evolve with superinfection
• Depending on the time elapsed since production:
  1. Recent, less than 6 hours, when the risk of infection is reduced
  2. Old, over 6 hours, with local development of infection
• From a medico-legal and forensic point of view, the following are distinguished:
  1. Assault wounds, which target specific regions of the victim's body
  2. Defensive wounds, as a result of the victim’s attempts to defend themselves

**Bone trauma**

Bone fracture, for the medico-legal evaluation, when the bone structures are interested, the forensic doctor is obliged to know the multitude of forms, the variants of fractures but also the mechanisms of their production, bone fractures can be classified into:

• According to the production method:
  a) Direct fractures occur at the site of impact, in this situation the fracture is accompanied by traumatic injuries
  b) Indirect fractures occur at a distance from the impact site
• Depending on the number of fracture paths
  a) Single fractures, which generate two bone fragments
  b) Double or tripartite fractures
  c) Multiple fractures
• Depending on the integrity of the skin
  a) Closed fractures
  b) Open fractures
• Depending on the pre-existing bone pathology
  a) Fracture on healthy bone
  b) Fracture on diseased bone

**Head trauma**

In medico-legal activity, head trauma is divided into cranio-cerebral trauma and cranio-facial trauma.

The neural skull has the shape of an ovoid with a large antero-posterior axis, being made up of two regions:

1. The cranial vault or calvaria, which is composed of the frontal bone, the occipital bone, the two parietal bones and the two temporal bones.
2. The cranial base is formed by the occipital bone, which takes part in the

---

formation of the base through its lower portion; then follows the sphenoid bone, which continues anteriorly with the frontal bone; this, through its transverse part, closes the anterior portion of the base.

Traumatic injuries of the bones of the neural skull are mainly represented by fractures and dislocations.

Neurocranial fractures can be direct or indirect, located at the vault or at the base of the skull.

Direct fractures occur in the impact area and are more common in the cranial vault which can withstand a depression of up to 1cm without fracturing returning to its original shape.

Fractures occur at the level of the calvaria:

a) Linearity
b) Openings
c) Cominutative, formed by multiple fracture lines that intersect at different angles.

Cranial vault fractures can be:

a) No clogging
b) With clogging, classifying into three degrees:
   1. Grade I. Obstruction of the external plate in diploe (diploe being a spongy bone found between the plates)
   2. Grade II. Depression of both plates with or without passing through the dura mater
   3. Grade III. Bone fragments pierce the dura mater and penetrate the brain mass

Indirect fractures, occur at a distance from the impact area, are more common at the base of the skull and are usually linear, such fractures are:

- Isolated indirect fractures, appear in the absence of a direct fracture focus, due to the forces propagating in the form of vibrations, through the bony structures of the head
- Contra-lateral indirect fractures, occur in the area opposite to the one where the traumatic agent acted
- Indirect compression fractures that change the cranial diameter.\textsuperscript{15}

Craniofacial trauma affects the viscerocranium, a prism-shaped region, the main area of interpersonal receptivity. The viscerocranium is anatomically delimited by a horizontal line passing through the zygomatic region, continued laterally at the level of the eyebrows, although the forehead is usually attributed to the face, anatomically it belongs to the neurocranium.

The orbital region includes the orbit, the eyeball and its appendages (eyelids, lacrimal apparatus)

- Mandibular fractures can occur through flexion, closing or opening of the mandibular arch, pressure, shearing, and pulling.
- Fractures on the middle floor of the viscerocranium which are very rarely fractured independently, most often the fracture also extends to the neighboring bones, where horizontal, vertical or mixed fractures can be distinguished, traumatic dental injuries.
- Fractures in the bony or cartilaginous nasal region, with or without displacement, closed or open, following a side or frontal impact.

Vertebro-medullary trauma

Interested in the spine, the main pillar of resistance of the human body, the spine is formed by overlapping vertebrae:

\textsuperscript{15}Valentin Iftene, Dan Dermengiu, Legal Medicine, CH Beck Publishing House, Bucharest, 2009
Seven cervical,
Twelve thoracic,
Five lumbar,
Five vertebrae of the sacrum
The coccyx

Between which the intervertebral discs interpose.\textsuperscript{16}

Within the vertebral-medullary traumas, the lesions are divided into closed and open (with disruption of the anatomical integrity of the integuments at the level of the trauma); the open ones are divided into penetrating (with damage to the dura mater) and non-penetrating in the medullary canal.

Closed injuries of the spine are classified as follows:
1. injuries of the ligamentous apparatus (extensions, ruptures of ligaments) and of the intervertebral discs, without fractures of the vertebrae;
2. fractures of the body of the vertebra (linear, flattened, comminuted, flattened-comminuted);
3. fractures of the vertebral arch, of the spinous, transverse, articular apophyses;
4. dislocations and fractures-dislocations of the vertebrae, with displacement in different planes and deformation of the medullary canal;
5. associated vertebral-medullary lesions.\textsuperscript{17}
6.\textsuperscript{18}

**Thoracic injuries**

Located in the upper part of the trunk, the bony thorax is formed by the sternum and the twelve pairs of ribs, the first seven pairs called true, because they join the sternum, the next three pairs called false, because the solidarity with the sternum is done by means of the cartilage of the 8th rib -\textsuperscript{a} and the last two floating ribs that do not articulate with the sternum.

The rib cage deformation process is based on paragal resistance (PR), coefficient of deformation (CD) and coefficient of restitution (CR). PR is considered as that compression value in which the first signs of bone destruction are recorded. CD represents the decrease in the sagittal diameter of the chest that causes bone fractures. CR is equal to the ratio between the size of the sagittal diameter of the chest, recorded after the end of compression, and the initial size. PR is diminished with advancing age, in people over 55, ribs fracture at ~60 kgf compared to young people (~20) where fracture occurs at ~650 kgf. PR is also influenced by the sex of the individual, females have less resistance due to their smaller size and degree of muscular development.

Deformation of the ribs can be produced by the application of blows with blunt agents, resulting in local fractures, the continuous deformation of the ribs generates, in addition to direct fractures, and indirect fractures, la young people, due to the cartilaginous elasticity of the ribs, it is possible keeping thoracic integrity with predominance injuries of internal organs.\textsuperscript{19}

\textsuperscript{16}Valentin Iftene, Dan Dermengiu, *Legal Medicine*, CH Beck Publishing House, Bucharest, 2009
\textsuperscript{17}Gheorghe Baciu, *Mechanical injuries in the medico-legal aspect*, Editorial-Poligraphic Center, Chisinau, 2006
\textsuperscript{18}Valentin Iftene, Dan Dermengiu, *Legal Medicine*, CH Beck Publishing House, Bucharest, 2009
\textsuperscript{19}Gheorghe Baciu, *Mechanical injuries in the medico-legal aspect*, Medicina Editorial-Polygraphic Center, Chisinau, 2006
2.2. Examination viewd through the sexual activity of the person

The obstetric-gynecological examination represents the medico-legal activity that analysis the penal side of the action and the civil side of the action, and it is trying to prove the virginity of the victim, the sexual activity of the person and the circumstances in which the abusive act was committed.

By means of the Penal Code, responsibility is provided for crimes regarding life sexual, thus according legislative framework:

Art. 218. Rape consists of a sexual, oral, anal relationship with a person subject to coercion or is unable to defend himself or express his will, thus the aggressor being able to take advantage of victim, this act is punishable by imprisonment from 3 to 10 years and removes certain rights the aggressor. The same punishment applies to other forms of sexual assault consisting of penetration vaginal or anal.

Punishment can grow from 5 years up to 12 years, in the situation in which victim is in the nursing, protection, education, guardianship of the perpetrator, the victim is a direct relative of the aggressor, the victim is a minor, the aggression had purpose production pornographic materials.

In the situation where the aggression resulted in the death of the victim, the penalty is imprisonment from 7 to 18 years.

Content constitutive

Through maturity sexe we understand a development human body. When sexual activity represents a physiological norm, without causing some health disorders and not damage the development of the minor. In women, these functions are represented by the ability to cohabit (copulation), of conception (procreation), of carrying the pregnancy at the right time and of natural birth. capacity to feed and care for the child does not directly refer to the signs of sexual maturation. For men, the functions sexed it manifest through capacity of copulation and fertilization.

Women are able to have sexual intercourse and to conceive and even touch full sexual maturity. In girls, sexual maturation takes several years. It starts with age 10-12 years and is completed by the age of 18. By 11-12 years, menstruation occurs. Simultaneously secondary sexual signs are also installed: hair grows in the axillary regions and on the pubis, they increase in mammary gland volume, etc. The ability to carry the load is determined by the normal development of uterus, and the birth physiological – of dimensions basin female, which happens at the age of 16-18 years.

If the girl has had a longer sexual life, it is put before the medical-legal expertise the question of whether the given person has reached the level of sexual maturity towards the beginning of sexual life. Of noted that sexual life, as well as pregnancy, accelerates the process of sexual maturation. boys they become capable of having sexual intercourse from the age of 14-15, but the sperm begin to mature 1-2 years later. The full development of the male organism is completed towards 17-18 years old. The 248 medico-legal expertise of sexual maturity in boys is much less frequently requested than at girls.20

The forensic experise of the victim

Examination people which A former victim of a aggression sexed must carried as fast as possible to ensure the collection of evidence. Victims of male rape presents fewer evidence of aggression, such as:

20Gheorghe Baciu, Forensic Medicine Course, Chisinau, 2013
bruising penises, elongated and thin, sometimes discounts in the the region glans and foreskin.

- Swelling the foreskin
- Traces of vaginal content and pubic hair
- Contact of an STD

Within the victims of sex female, it can be:

- The presentation of sperm in the vagina or in the pubic or perianal region that can be retrieved even after four or five days, the retrieval of vaginal contents is mandatory for the crime of rape
- The presence of pubic hair from the aggressor
- Contacting a venereal disease that requires repeated examinations, because the symptoms appear after a certain period of time
- Existence of pregnancy due to rape
- Parineovaginal tears, when there is a major disproportion between the sexual organs

- Hymenal ruptures in women who did not have intercourse before rape.

The medico-legal examination must be carried out no later than 14 days after sexual intercourse because hymenal rupture problems such as: asymmetric ruptures, with an irregular trajectory, delimiting lobules with offensive edges, red, swollen, easily bleeding or with adherent blood clots as a rule complete (up to the base of insertion) and more frequently multiple, these signs diminish over time, after 8 days there are reductions in bleeding regarding post-traumatic edema as well as a reduction in local pain concomitant with the process of epithelization and delimitation of the hymenal lobules. The old tears, which separate the atrophied hymenal lobules, are differentiated from congenital notches or incisions, often these being symmetrical and incomplete, differentiating the hymenal lobules with thin, inoffensive edges, of the same appearance and coloring as the rest of the hymen.

Virginity, from an anatomical point of view, consists in the integrity of the hymen, it is lost from a medico-legal point of view through three methods: a) Anatomical virginity, represents the loss of hymenal integrity and can be produced by self-inflicted or heteroaggression, heteroprovoked virginity is carried out with consent through sexual intercourse, through vaginal erogenous act and through medical intervention or without consent resulting in the crime of rape, in the situation where produce injuries such as: vaginal tears, perineum tears or uterine perforations are considered complicated or pathological virginity.

b) Functional virginity or pseudovirginity, represents the maintenance of hymenal integrity but with alterations of chastity in an ethical and moral sense, can be found in women who maintain sexual acts without vaginal penetration but through "sexual games" without the introduction of the penis but with the possibility of contacting venereal diseases or pregnancy, through ejaculation.

c) Psychic virginity, caused by psychotic disorders, is characterized by the fact that the respective individual considers that he has been virgin, regardless of the fact that the sexual act cannot be proven, there is also an opposite form, whereby the individual considers himself to be a virgin even though had intercourse or even gave birth.

In the case of sexual intercourse performed by inserting the natural penis into the oral cavity or anus, the following ideas are noted:

1. From a medico-legal point of view, the examination of oral sex can be performed by examining traumatic injuries represented by bruises located in the deep, upper or lateral parts
2. In the case of anal intercourse, the following findings can be highlighted:
a) At the level of the penis, the same traumatic injuries can be observed as in the case of sexual intercourse, but with much more prominent elongated and thin ecchymoses, along with erosions present at the level of the glans and foreskin. Other elements that highlight sexual intercourse are traces of anal content in the area of the balanopreputial groove or contact with venereal diseases.

b) The medico-legal probation regarding anal intercourse consists of elements such as: traces of sperm present in the colonic area, contact with venereal diseases in the anorectal region or traumatic injuries.

This aggression\textsuperscript{21}, most of the time, has no clinical expressiveness due to the sphincter's dilability, it can cause exorcrations, cracks in the mucosa, elongated ecchymoses or ruptures of the perineum.

In the case of the vaginal or anal erogenous act, it consists in the introduction of a foreign body, excluding the natural penis, the traumatic injuries caused by such intercourse are often serious, due to complications such as: perforations of the uterus, perforations of bowel or perineum tears, the consequences of this action can be debilitating or fatal, the agents that can achieve this ratio are:

- Hard objects sticks, branches, artificial penis, finger, etc.
- Substances with local toxic action that cause burns
- Liquid substances or incendiary bodies that cause thermal burns
- Air, under pressure that can cause the intestine to explode

The physical coercion of the victim or the medical condition that did not allow the victim to defend himself or to express his consent can be proven through a medico-legal examination.

Physical coercion\textsuperscript{22} can be achieved from a medico-legal point of view through the presence of traumatic injuries, having different elements, being located in areas such as the inner parts of the thighs, perineum, breasts or in areas that show traces of immobilization of the victim such as forearms, the head or neck area if an attempt was made to stop the victim from crying for help or even suffocation. The traces of physical coercion are diverse, the most common way of identification is represented by the presence of ecchymoses, excoracies or wounds, the severity can vary from superficial injuries to serious or debilitating injuries.

The means of production in the case of physical coercion consist of: the aggressor's own means such as hands, mouth, etc. or various objects that may suggest the premeditated intention of the perpetrator.

Implicit coercion, regarding the condition of the victim that does not allow him to resist the sexual assault or to express his consent, which gave the aggressor the opportunity to take advantage\textsuperscript{23}, can be established through the medico-legal expertise.

- State of unconsciousness following coma, epilepsy, agony, intoxication with sedative substances, alcohol.
- Mental disorders that can affect the individual's discernment such as schizophrenia or various forms of psychosis.
- Organic diseases that affect the victim's ability to defend himself from the aggressor, such as paralysis, deaf-mute.

\textsuperscript{21} Ivan Anane, \textit{Elements of theory and tactics of criminal prosecution bodies}, Pro Universitaria Publishing House, Bucharest, 2014
\textsuperscript{22} Gheorghe Buzescu, \textit{Particularities of contravention law}, Sitech Publishing House, Craiova, 2017
Physiological states such as deep sleep and that associated with confusion over the perpetrator, extremes of age or severe fatigue.

**The medico-legal examination of the aggressor**

The examination of the perpetrator is necessary is necessary in terms of judicial probation in the case of the crime of rape, the following elements can be listed as evidence:

1. The evidence produced by the victim who tried to resist the aggression can cause different traces that help establish the action, such as the traumatic injuries present on the body, the most common being on the face, neck, shoulders or forearms, represented by ecchymoses, hematomas and excoriation parallel or spaced apart, formed by agents such as different objects or nails or bite wounds.
2. Traces of vaginal or anal contents at the level of the male genital organ and possibly traces of pubic hair from the victim.
3. Contacting a venereal disease
4. Traces of sperm in the vagina or anus in the situation where the aggressor is female, as well as the possibility of pregnancy.

**Establishing sexual capacity**

Sexual capacity is determined more frequently in connection with various sexual crimes. Men are usually subject to the expertise. A man can be able to have sexual intercourse, but at the same time be unable to fertilize. For this reason, the named functions are researched and evaluated separately. The determination of the inability to copulate in men is oriented towards the detection of copulatory impotence. This state is called sexual impotence. The very sexual impotence in men can be conditioned by local mechanical factors (tumors, injuries, scars), by general causes (endocrine diseases, intoxications) and psychological (neurosis, fear of failure). Cohabitation sexual impotence is not always complete. Its diagnosis is difficult. That is why the medico-legal conclusions regarding the man's cohabitation capacity can only be drawn up after a thorough examination. Procreative capacity is the man's ability to impregnate the woman. This condition requires the presence of normal sperm-producing testicles, permeable excretory ducts and unregulated ejaculatory reflexes. Fertilization capacity is established only after examining the seminal fluid in order to determine in it a sufficient number of normal and mobile spermatozoa. For research, the ejaculate is obtained in the expert's premises or is brought to the forensic laboratory by the examiner, in a condom no later than 30-50 minutes after obtaining it. Fertility impotence can be congenital or acquired.

Sexual capacity in women is determined more frequently in divorce cases. The expertise methodology in these cases is similar to the one used to determine sexual maturity in girls. There are various causes that make a mature woman unable to copulate: atresia of the hymen or vagina, huge scars in its region, prolapse of the vagina and uterus, vaginismus. The inability to copulate in women quite rarely becomes a problem of medico-legal expertise. The reproductive capacity in women appears at sexual maturity and ceases at menopause. Sterility can be generated by some changes in the position of the uterus, by tumors, by some deficiencies in surgical interventions, by radiation with radiological rays, by the consequences of some inflammatory processes (gonorrhea, tuberculosis). The ability to give birth is relative, it can be deregulated by various causes: most frequently by the disproportion between the fetus and the mother's birth canal, pelvic malformations or narrow pelvis, etc. The expertise of sexual capacity in both men and women often encounters difficulties, therefore it is recommended to
be carried out by a committee of specialists, usually after a clinical research in specialized inpatient conditions.

**Forensic examination of pregnancy, childbirth and abortion**

The diagnoses regarding the pregnancy, the age of the pregnancy, recent birth, old birth, termination of pregnancy or abortion are recorded by experts in this medico-legal report including the means used, specifying the date of the activity as well as the existence of complications if necessary. This medico-legal examination of pregnancy can be carried out in situations of rape or sexual perversions, and as a result of these actions the pregnancy occurred.

The assessment of pregnancy is based on two categories of signs, namely signs of probability and signs of certainty. Among the signs of probability are elements that do not guarantee the possibility of pregnancy, such as: menopause, pigmentation of some areas of the skin, colostrum secretion of the mammary glands, voluminization of the mammary glands and the uterus. These signs usually characterize the first half of pregnancy, being expressed more obviously in the second half. The uterus progressively grows according to the time of pregnancy. The sure signs of pregnancy are those that indicate the presence of the fetus in the uterus.

Among these signs are the consecutive hormonal changes, which indicate the presence of the embryo in the uterus. They are highlighted by biological reactions. Hormonal reactions are early and are based on the elimination through urine of a quantity of gonadotropin hormones. Biological reactions are also positive in ectopic pregnancy. Between weeks 16-18 of pregnancy, the fetal heart beats, and between weeks 18-20, fetal movements appear. These signs, indisputably, confirm pregnancy. Palpation of the fetal parts or the radiological examination that highlights the fetal skeleton can also be used.

The last method is performed only in exceptional cases. Determining pregnancy when examining corpses does not present difficulties.

The medico-legal examination of birth is only interested in certain aspects, such as infanticide, abandonment or abduction of newborns, simulation of pregnancy and birth. The expertise will appreciate the person in question, whether he gave birth or not, the age of birth. For proof of recent birth, changes in the mammary glands, external and internal genital organs, as well as the condition of the integuments are taken into consideration. The authentic signs of recent birth are: swelling of the genital labia, dilation of the external uterine orifice, ruptures of the external genital organs, increased volume of the uterus and discharge from the vagina. Towards the end of the 6th - 8th week, early signs of recent birth are difficult to diagnose.

Abortion represents the act of interrupting the normal course of pregnancy in the first 28 weeks (after this time it is considered premature birth). Medicine divides abortion into two categories, namely spontaneous (pathological) and artificial (provoked) abortion. Induced abortion is divided into: medical (therapeutic), accidental and criminal (illegal, delictual). The causes of pathological abortion are the diseases of the mother and the fetus, infectious, cardiovascular, kidney diseases, poisoning. Abortion is often conditioned by: the infantile nature of the uterus, abnormalities in the position of the uterus, hormonal insufficiency, Rhesus-conflict (negative), etc.

Medical abortion is the interruption of the course of pregnancy within 6-12 weeks from conception at the woman's desire. After this term, the artificial interruption of pregnancy is carried out only on the basis of medical indications (induced premature birth).

---

24 [https://www.slideshare.net/CostelBucur/medicina-legala141012101714conversiongate02](https://www.slideshare.net/CostelBucur/medicina-legala141012101714conversiongate02)
Accidental abortion is an involuntary abortion that has a traumatic or toxic origin.

Criminal abortion is the termination of pregnancy in cases not provided for by law. For example, by the woman herself, by people who do not have medical studies, in unsanitary conditions, even if it is performed by a doctor. More often criminal abortion is performed in cases when the woman hides her pregnancy, she is shy to show the doctor when she has contraindications to a medical abortion. The means of criminal abortion are very varied: mechanical, chemical, thermal, physical, combined. For the purpose of criminal abortion, massage of the uterus, electric procedures, thermal vaginal procedures, perforation and destruction of the fetal membranes are performed, different foreign objects, liquids are inserted inside the uterus. Abortion can be caused with different drugs, which contribute to the contraction of the uterus (alcohol, pachycarpine, quinine, hormonal preparations). The criminal investigator is obliged to know the possible methods of criminal abortion in order to competently carry out the on-site examination. Criminal abortion can be caused by the pregnant woman, but more often she calls for the help of other people. Often the abortion caused under illegal conditions leads to the death of the woman during its performance or shortly after it. In most cases, death is caused by acute hemorrhages, by shock caused by perforation of the uterus and damage to the intestine, by gas embolism as a consequence of the introduction of soap solutions into the uterus, by poisoning with various toxic substances, by acute renal failure, sepsis, etc.

The medico-legal expert can encounter great difficulties in determining the recently induced abortion, if a long time has passed since it. The medico-legal expertise in abortion is carried out in commission, with the participation of the obstetrician-gynecologist, having as the basic problem the positive diagnosis of pregnancy and the abortive state, the assessment of the causal relationship between the procedure used and the abortion, between abortion and death, the differentiation of spontaneous abortion from the caused etc. Often, it requires the assessment of termination of pregnancy conditioned by trauma. In a healthy woman, traumatic agents, very rarely, cause the termination of the pregnancy in the first half, while in the 2nd half the pregnancy can be easily disrupted by a direct blow to the abdomen or falling on the buttocks, etc.

When determining the causal link between the termination of the pregnancy and the trauma, the medical examiner will study the anamnesis and the medical documents related to the evaluation of the pregnancy before and after the trauma. The circumstances of the trauma will be assessed, how long after it did the signs of impending abortion or premature birth appear, if the pregnant woman was ill with certain diseases pre-existing the trauma, etc. The character of the bodily injuries will be determined, a thorough gynecological (specialist) and laboratory examination will be performed.

The assessment of the date of conception in the medico-legal expertise is based on a complex of special information: the date of intercourse; the date of the first day of the last menstruation; ovulation date and optimal term of conception; the date of the first movements of the fetus; date of birth. The anthropometric indices of the newborn, which reflect the date of conception and the duration of the pregnancy, can also have a certain value.

---

26 Gheorghe Baciu, *Forensic Medicine Course*, Chisinau 2013
2.3. Taking and analyzing biological samples

Biological, microbiological, serological examination, or other types of examinations, are necessary in the medico-legal activity, to obtain the data necessary to identify the elements in terms of crimes of injury, rape, etc. These examinations also include procedures for determining, measuring or otherwise describing the presence or absence of substances or organisms in the human body. The examination may consist of one or more tests accompanied or not by their interpretation.  

Biological samples can be established as evidence only in certain situations, if they represent an element that constitutes part of a crime, can lead to the identification of the suspect or to be able to establish the circumstances of the illegal act, thus contributing to the solution of the case.  

For this reason, within the Forensic Medicine Center, the following laboratory sections operate: biological (serological), toxico-narcological, histopathological and medico-criminological.

Examination of traces of blood

Liquid blood and bloodstains are the most common items of study in biological investigation laboratories for personal injury, rape, or other cases. Through the examination procedure of blood samples, the specialist can determine a series of elements that support the identification of key information, such as the determination of blood according to biological groups, thus identifying the suspect with greater ease, through the genetic-molecular method (DNA), can determine the implication of a person by examining the traces of blood existing on the individual or on his objects, can determine the sex of an individual by the basis of blood, the age of an individual, etc.

Examination of the aggressor

It aims to identify the traces of blood on his body, paying attention to the areas that he may not have washed, it is recommended that the aggressor's nails be cut, because under the nails important substances and micro-particles may remain for examination.

In the situation where the individual has physically assaulted the victim, splashes of blood can be found on his body or clothes, and in the case of a sexual assault, traces of blood can be observed on his underwear or other clothing items.

Taking traces of blood,

The blood samples are sent to forensic medicine institutions together with the address where the report was made and the copy of the minutes, these documents being indicative for the specialist so that he can select his laboratory examination method.

Examination of sperm traces

The request for sperm examination is found in the case of the crime of rape, the sperm liquid can be found in vaginal, anal, oral secretions or in the form of stains on the victim's clothing.


*29 https://ulim.md/sju/nr-1-2-2014/particularitati-de-recoltare-si-interpretare-a-urmelor-de-sange-uman-la-fatalocului/*
Depending on the surface on which the spots are found, they can take on different aspects, on the non-absorbent surface, the loops are less visible, having the appearance of scaly films, on the absorbent surface, the spots can take on different colors, yellowish-dirty or whitish-gray.

The objectives that the medico-legal examination must fulfill are: to ensure that the sample presented is indeed spermatic fluid, the origin of the sample found and the identification of the person.

Establishing the existence of sperm is carried out by microscopic examination, the observation of a single spermatozoon or part of it results in the fact that the discovered trace contains sperm, in case the result is negative for various reasons such as the possibility of destruction due to external factors, it is possible to resort to other methods of examination, by electrophoresis or chromatography.

In the situation where the existence of traces of spermatic fluid has been approved, the AB0 system will be used, sperm, like other tissues of the human body, contains antigens for establishing the blood type.

The comparative examination is performed with the results of the analysis of the sample collected from the suspect, for this type of examination saliva and blood are usually taken.31

The exclusion of the suspect is possible in the situation where the samples found and the samples collected from the suspect result in different antigens, but in the case of the result of identical antigens, it allows the expert to use the following sentence: "It is not excluded that the sperm fluid found at the crime scene, on victim's clothing and/or body from person X".

Examination WIRES of hair

Wires of hair is sometimes the main body of CRIME in the most of them criminal cases, these samples are collected and packaged separately, in accordance with procedural compliance a activity, if it is needed compare samples, it harvested WIRES of hair of TO differently people(victim, alleged defendant), through the samples, the specialists can identify the provenance threads of hair.

During the examination, experts medico-legal answer to a number of questions, such as:

1. SAMPLING found are nature of hair?
2. Provenance threads of hair
3. MECHANISM of detachment A WIRES of hair
4. Body hair region
5. The natural color of the threads
6. The existence of particular signs at the level of the strands (paint, chemicals, hair diseases)
7. Do the hair samples match the suspect or the victim?

Hair is determined by visual (macroscopic) and microscopic research, samples are collected by pulling at least 10 samples from each anatomical region. The evidence will be recorded in a crime scene report, the evidence will be packaged separately according to the region.

30 Anane Ivan, Management of criminal investigation bodies, Pro Universitaria Publishing House, Bucharest, 2014
Forensic experts can determine the mechanism of thread detachment by studying the extremities: the existence of the bulb that normally advocates pulling out with the root, and the smooth linear border will advocate for cutting.

The presence of particular signs, such as chemicals or the concentration of these substances at the level of the threads, is identified by spectral analysis.

The provenance of the biological sample is determined by specialists through a comparative examination of objects picked up from the site or collected from certain people, through the comparative examination the characteristics of the sample are examined such as: length, thickness, color, aspects of the cuticle, etc. Also, antigens of the AB0 system are established at the level of the hairs, which allows the exclusion of origin from certain people.  

3. Organization and operation of the medico-legal activity

Forensic medicine represents the integrated part of medical assistance and consists in carrying out expertise, examinations, findings, laboratory examinations as well as other medico-legal works on living persons, biological products and criminal objects in order to establish the truth in cases regarding crimes against life, integrity bodily and health of people or in other situations provided by law.  

The duties of the health institutions that carry out the medico-legal activity consist of a number of elements, at the request of the criminal investigation bodies, the courts or at the request of the interested persons, they draw up examinations, findings, carry out laboratory examinations or other medico-legal documents; conducts scientific research activities in the medico-legal field and provides documentary materials to university education.

The attributes of the medico-legal offices are to carry out any expertise, at the disposal of the criminal investigation bodies or the courts, provide the medico-legal examination at the request of the interested persons. The medico-legal examination at the request of the interested persons is ensured only once for the same persons, for the same deed.

With regard to the regulation of medico-legal specialists, the findings are made by forensic doctors and the expertises are carried out by forensic doctors who hold the status of officially appointed experts, the performance of expertises can be assisted by experts appointed by the judicial bodies, and they have the ability to request complementary investigations and in the case of expertise on documents, they can work individually, in parallel with the official experts. The experts appointed by the court at the request of the parties have access only to the medical and medicolegal data contained in the criminal investigation file.

In order to be a medico-legal specialist, the person must meet certain conditions, must be a Romanian citizen and know the language, have completed specialization courses in forensic medicine, have a degree from a university medical education institution, have not been convicted for a crime.

Forensic experts are evaluated annually by the Superior Council of Forensic Medicine, with experts risking the suspension or withdrawal of their specialist status if the specialist has not fulfilled his duties.

The legal doctor can issue only one medico-legal certificate, he cannot participate in the drawing up of another expert report or the performance of a new medico-legal expertise.

33 https://www.slideshare.net/CostelBucur/medicina-legala141012101714conversiongate02.
The judicial bodies cannot select specialists to take part in the performance of the expertise if the expert was a witness in the same case or affirmed his abstention, being in a case of incompatibility.

The medico-legal specialist must refer to certain rights and obligations, among these elements we can list: the right to reject the performance of the expertise, the right to know necessary elements of the file if they are related to the expertise, the right of the specialist to request information related to the crime from the judicial body that initiated the performance of the expertise, from the parties and subjects of criminal proceedings, the right to a fee due to the effort made by the specialist, be it physical, mental or monetary, the right to protection in case the possible injury to the expert. The obligations that the specialist faces are: the obligation to draw up the expert report by the set deadline, the obligation to appear at the request of the criminal investigation bodies or at the request of the court, if the specialist refuses to carry out the expertise, he is obliged to provide justified reasons to avoid possible judicial fines or civil liability.35

The medico-legal documents are represented by the expert report, the finding report, the certificate, the analysis report and finally the opinion.

According to art.10, when the medico-legal documents are drawn up, the commission has certain obligations to fulfill, these being: examination of the certificates, medical reports, observation sheets issued by the health units, to ensure that the mentioned documents present safety features (registration no., stamp of the health unit, signature), the medical examiner cannot accept other types of medical documents than those prescribed as a computer source.

According to art. 11, the expert report and the ascertainment report require the presence of the letterhead, stamp, no. of registration of the medical institution, these documents are signed by the participants when drawing them up, if there are conflicting opinions, they are registered separately and motivated.

The medical opinion is drawn up through the Higher Commission of Legal Medicine or through a commission for the approval and control of medical documents, the opinion arises at the request of the judicial bodies that have the possibility to accept the content of the medico-legal documents and requires the drawing up of a new expertise or conclusions.

The analysis report, this is the medical document drawn up by the medico-legal experts at the request of the interested persons, which includes information from the complementary examination.

The medico-legal certificate represents the act established by the forensic doctor at the request of the interested persons and contains elements related to the medico-legal examination.

The finding report consists of the act drawn up by the forensic doctor at the request of the criminal investigation body or at the request of the court, the report containing information related to the finding made.

The medico-legal expertise report is prepared by an expert at the request of the criminal investigation body or at the request of the court, it consists of data related to the performance of the expertise.

References


---

[14] GC Turkey, Valentin Iftenia, *Medicine legally Support of course*, University FROM BucharestFaculty of Law, 2013 ;