

## **MEDICO LEGAL EXPERTISE INTRAUMATOLOGY**

Due to the increasingly exacting standards regarding the aspects of judicial procedures, the addressability towards medico-legal services in expertise on living people increase continuously. This includes persons who privately require medico legal certificates as well as penal or trial investigation committees that request statements or medico-legal expertises.

Medico legal expertise released on request is referred for the following:

1. Certificates for injuries concerning:
  - Acts of aggression
  - Traffic accidents
  - Work-related accidents
2. Establishing sex
3. Establishing age
4. Certificate stating age for marriage
5. For gynecological examinations regarding
  - Virginity status
  - Deflowered status
  - Pregnancy status
  - Sterile status

All medico legal certificates are released following written requests, stamped with fiscal stamps and taxed corresponding to the legal provisions.

Statements on medico-legal expertise documents are requested in writing, through address or order – by penal or trial investigation committees. They do not require stamps, but are taxed according to the provisions of the same laws. The respective sums are written with the specifications that they will be advanced by the state to investigations or trial expenditure accounts and will be from the state budget.

These examinations refer to the following:

1. Medico legal report regarding lesions of violence in case of:
  - Acts of aggression
  - Traffic accidents
  - Work accidents
2. Acts concerning establishing invalidity and incapacity to work
3. Acts concerning state of health or sickness
4. Acts concerning gynecologic examination
  - Virginity or deflowered status
  - Sterile or pregnant status
  - Abortion
5. Acts concerning appreciation of age
6. Acts concerning establishing sex

7. Acts of psychiatric expertise
8. Acts concerning proof of paternity
9. Acts concerning sex inversion
10. Acts concerning sex impotence

Regardless whether it is a certificate or a requested official medico legal act (expertise), they have the following structure:

- a. Title (medico legal certificate, statement or medico legal expertise)
  - b. Introduction – which will include:
    - Name and professional degree of the doctor
    - Type of request (private request, address or ordinance of official body – with their telephone number and data)
    - Name, age, address, official document attesting to legitimacy of person (in the absence of identification papers all the alleged personal information are documented but also, at the end, fingerprints from the 2<sup>nd</sup> finger of the left hand will be taken on all copies.
  - c. Data concerning contents of expertise collected from,
    - Information provided of victim or investigation body
    - Clinical observation papers, treatment files, operator's protocols, radiographs, laboratory analysis etc.
    - Documents concerning objective of experts found in investigation or trial files
  - d. Descriptive parts – which describe all the objective elements that constitute contents of expertise (injuries, aspects of invalidity, aspects of hymen, clinical and laboratory signs which define rape, clinical elements of psychiatric expertise etc. )
  - e. Conclusion: should answer the problems, by the request of the plaintiff or by the order of committee of penal or trial investigations, that are requested to be solved.
- The conclusions should be clear and precise. It should be objectively motivated by the descriptive part of the medico legal report.

## **EXAMINATIONS CONCERNING LESIONS OF VIOLENCE**

Injuries can be the consequence of violence, work or traffic accidents.

The doctor, by a systemic examination, should find all the injuries and describe them in minute details, concerning their forms, dimensions, their morphologic aspects, and exact anatomical locations.

The location of the injuries is especially important, which is why it should be established with maximum precision.

*It cannot be limited to: “an ecchymosis of ¾ cm at the level of the right arm”. The right description would be: on the external surface of 1/3 medial of the right arm, an ecchymosis dark violet in color, oval with well defined margins, and a diameter of ¾ cm.*

The shape of the injuries – especially those with the smallest diameters, may help us identify the causal agent, which is why description is absolutely necessary.

Sizes are always measured with the same measuring unit, preferably in centimeters. It is obligatory to establish the length and width of the injuries. Wounds also have their openings established and in exceptional cases, when this can be appreciated without any kind of criteria, the depth is also established.

Describing injuries color is important especially in ecchymosis, hematomas, or crusts of excoriations.

The margins of the injuries are described in ecchymosis, excoriations as well as in wounds. Describing the margins of wounds is an important element for differentiating cut wounds from split or lacerated wounds.

Documenting the functional disturbances associated or determined by lesions of violence should not be omitted.

*For example: reduced movements of supination or pronation in a contusion of the forearm.*

**Ecchymosis** - the description includes exact color, aspect of the margins and sizes. The age of the bruises is determined by the color, and the way they were produced can be appreciated by the sizes, form and contour.

*For example: discovered on the left lateral surface of the neck, 3 – 4 round or oval ecchymosis, with wiped out margins, 2/3 cm diameter, , and on the right lateral surface, other ecchymosis of the same aspect. It can thus be concluded that they were produced by hand strangulation.*

*The presence of periorbital ecchymosis implies a direct blow with a blunt object (e.g. fist).*

The ecchymosis should be differentiated from artifacts, false markings with colorants made with the purpose of simulating injuries.

In case when the same individual has ecchymosis of different colors (some violet, others green or yellow, it must be concluded that they were produced at different dates.

**Excoriations** (abrasions) – their location, shape and sizes allow us to establish the way by which they were produced. *Linear or lenticular excoriations, on the cheeks and on the neck can be caused by nails. Abrased areas, such as on the anterior aspect of the knees or the posterior aspect of the elbows are due to falls on rugged or irregular surfaces.*

The color of the crusts and the aspect of the margins coincide with the age of the excoriations.

Self provoked excoriations can also be found. They are situated in anatomical regions which are accessible to the perpetrator, often parallel to each other and of approximately the same dimensions. *For e.g.: A woman is examined with very fine linear excoriations on both cheeks covered with blood crusting. The excoriations are all oriented from top to bottom, almost parallel*

*to each other and of the same length. They could be self-inflicted excoriations with the help of a needle.*

The examination of **wounds** must show: shape and sizes, aspect of the margins, aspect of adjacent tissues and depth. The exact anatomical location, angle (inclination) on which the longitudinal diameter of the wound is formed in relation to the axis of the respective region, and the direction of the wound in the depth of the tissues should also be established.

By knowing all these characteristics, we can differentiate the lacerated wounds from the cut, split or stubbed wounds, while - on the other hand, the causal agent and direction of the blow can be appreciated.

We can also appreciate if the wound has the characteristics of a recent or an older lesion (by scars, granulation tissue etc.) and if there are signs of local or loco – regional infection.

Sometimes, external injuries are accompanied by internal traumas (contusions, fractures, luxations, rupture of internal organs, internal hemorrhages etc.) In these cases, for the positive diagnosis, the therapeutic plan and duration of medical care, the forensic doctor has the right and obligation to request specialists' opinions. The medico legal document will include in its descriptive part, the results of these specialists' examinations: radiographs, diagnostics and established treatment etc.

In situations when the examinations are requested much later after the date of the traumatism, the doctor can also appreciate: sequelae, scars, or complications of the injuries. *For e.g. arthrosis – after a prolonged immobilization, consecutive fractures; retracted scars – after burns; atonic infected wounds, which do not scar etc.* In these cases, along with the description of the present state during the examination, the forensic doctor will ask for copies of medical documents (clinical observation sheets, consultation files and treatment of the clinic, discharge papers from the hospital etc.), in order to establish which were the primary injuries, as well as the way they were produced and the duration of treatment. In this medico legal report, it must be specified if the present state (infection, arthritis etc.) is due to incorrect treatment or independent of these factors.

Sometimes, the patient presents different diseases: *thrombophlebitis, - after limb fractures; posttraumatic pneumonias etc.* In order to make the connection of direct cause between the trauma suffered and the diseases discovered at examination, the following has to be established:

- There should be a concordance of location between the trauma and an organ which has a resembling disorder due to the trauma. *(for e.g. fracture of the calf – thrombophlebitis of the calf);*
- Absence of the respective disease before the trauma.

**The conclusions** of the medico legal report concerning the injuries should clarify the following problems:

- a. age of the injuries
- b. mechanism (direct or indirect blow)
- c. agent (object) that caused the injuries
- d. duration of medical care (characteristics of the care)
- e. invalidity state

Age of injuries – This is not established according to the information provided by the victim, but from the aspect of the lesions, color of the ecchymosis, grade, aspect of the crusts, stage of evolution of the wounds, calluses of the fractures etc.

Lesions with different stages of evolution can be seen in the same individual. In this case, it is concluded that the lesions were produced at different times.

Mechanism – There can be direct injuries, produced by movement of causal agent that strikes the body of the victim, or indirect injuries, when the victim fell or by projection against a surface. One or both types of mechanisms can be found on the same individual. *For e.g. palpebral ecchymosis, which can be due a direct blow from a contondent body (fist); excoriations on the knees or elbow, which are definitely indirect lesions by falling on the ground or other rough surfaces.*

Causal agent – This can be identified with precision in exceptional cases. Yet, after the morphologic characteristics of the injuries, the type of object can always be identified: *blunt objects, sharp and cutting instruments or splitting instruments.*

Duration of medical care – is appreciated according to the severity of the injuries and necessary effective treatment. The treatment is calculated in days, starting from the date the incident. This is especially important because, by an erroneous interpretation, a wrong judicial judgment can be made. *For e.g. a person who was beaten goes for a consultation on the 6<sup>th</sup> day. The doctor documents the presence of uninfected contused wounds which are on the way of scarring, and appreciates the need of medical care for 8 days, mentioning that this is calculated from the date of aggression, not from the date of examination and eliberation of the certificate. Without this specification, those who interpret the certificate in court could accord only 8 days of medical care on the 6<sup>th</sup> day (the day of examination), five days after the aggression, when the lesions actually required  $5 + 8 = 13$  days of medical care.*

Medical care refers to the necessary treatment period and should not be confused with the time for reccuperation. *An ecchymosis does not require medical care, but persists for about 10 – 15 days. So the time for medical care is zero, while the time for healing is 10 – 15 days.*

Because often the precise duration of treatment cannot be anticipated, it is necessary to have a certain reserve in the calculated amount of days needed for medical care, to include

complications that could appear. *For e.g.: “....requires 6 (six) days of medical care from the date of production of the lesions, if no complications appear....”*

Invalidity – Especially serious injuries can heal with sequelae, which can constitute an invalid state and can temporarily or permanently affect the capacity to work.

Permanent infirmity is characterised by irreversible morpho-functional modifications, while invalidity refers to reduction or total loss of capacity to work.

Invalidity is appreciated by the Commission body for appreciating work capacity, in three grades of invalidity. Infirmity is not appreciated in grades or percentages.

Severe esthetic loss refers to a visible permanent deformity which can constitute an esthetic prejudice to the respective person.