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Original Review Article

The Role of Forensic Dentistry in Detecting Crimes in Jordanian Law and Judiciary

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Abstract

This research dealt with the topic of the role of forensic dentistry in detecting crimes in Jordanian law and the Jordanian judiciary. The aim of present study is to the role of forensic dentistry as part of forensic medicine in determining the identity, age, and gender of body owner, as well as estimating the time period of death and determining the cause of death, particularly in the cases of hanging or strangulation, and investigation of incidents of assault by biting that accompany many crimes such as rape. The extent to which legislators and the Jordanian judiciary consider forensic dentistry reports to detect the crimes committed. The need to explicitly stipulate in the Jordanian Criminal Procedure Law that forensic dental reports are considered one of the means of detecting crimes, and stimulating the role of the judiciary in adopting forensic dental reports during the process of detecting crimes, because of its practical importance and accurate and rapid results.

1. Introduction

The importance of the research lies in that it addresses the role of forensic dentistry in detecting crimes in Jordanian law and the Jordanian judiciary. The extent of the role of forensic dentistry in detecting crimes and recognizing the causes of death or physical injury, also, the research topic is one of the current and important topics that have a great impact on practical reality, and by consulting the jurisprudential opinion in forensic dentistry and the provisions of laws related to the subject of the research, and according to the jurisprudence of the Jordanian judiciary, the research will clarify all aspects of the subject, whether theoretical or practical. In addition, it will address the insufficiency points in the Jordanian medical constitution and the Jordanian Law of Criminal Procedure.

2. The historical development of forensic dentistry

It should be noted that while researching the historical development of forensic dentistry in "1937" at (Chantilly) city it was observed that a person was convicted of murder as a result of the bite marks left by the assailant on the victim's body, moreover, in (1946), "Duality" and "Glasgow" recommended setting up a system in which (500) cards of dental fundamentals could be entered in just one minute on a computer set, whereas, (Dr Talresal) recommended the "Lilith System", a system that operates with punched cards to match results, later, the "American Board of Forensic Odontology (ABFO)" was founded in (1967) and examined over one hundred and examined over one hundred and sixteen forensic dentists, where the quantities of bodies identified

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through forensic dentistry increased from (17) in (1973) to (91) in (1995).¹

All organs of the human body were an integrated unit where the general physician takes care of all the organs of the body, including oral and dental medicine, later, since the middle of the nineteenth century and early twentieth century until now, dentistry has become an independent speciality, and it has become an individual speciality. It has its various branches and many specialities. Nowadays, forensic dentistry has its own specialized identity, where it works alongside forensic medicine and many other medical specialities, in exposing some criminal social incidents and solving forensic medical issues to which it is attributed to reveal the signs and clues related to the mouth, jaws and teeth, as well as in some cases with common oral manifestations.²

3. The definition of forensic dentistry

The crime scene is the key to solving the crime mystery and is the first and important starting point for starting the handling of the criminal case, so that if the measures taken at the crime scene are correct, the whole process of investigation of the case will be correct, where specialists visit the crime scene only once. After that there will be no crime scene if the legal experts visiting crime scenes are inaccurate and untrained. Suppose necessary measures are not taken for the permanent and future preservation of this scene and its contents. In that case, the most important part of the criminal investigation into this case will be lost forever, where legal crime scene previewing is a professional and specialized task that requires many years of practical experience along with continuing education and training.³

Forensic medicine in general is a science that deals with many medical topics, as other departments of medicine, including forensic dentistry, are part of it, it deals with the topics and issues brought before the forensic physician by the judiciary or law enforcement departments, and since it direct the judge to find out the causes of the crime, the date and time of its occurrence, hence the name of "forensic medicine", in the sense that everything that is required from the forensic physician for the benefit of law and the judiciary, forensic medicine has a direct impact in combating crime and providing security statistics for the most widespread criminal cases in order to take preventive measures to prevent crimes, also, the judiciary in many cases is unable to

adjudicate many lawsuits without referring to the forensic medicine.⁴ Based on the preceding, forensic dentistry means: "The employment of dental sciences in a way that serves forensic medicine and the judiciary in general, and to enhance knowledge of legal aspects that can be based on tooth evidence".⁵

It is observed that universities have a role in creating special programs for teaching forensic dentistry courses due to its importance in detecting crimes; in addition, the physician assigned to detect the crime is a specialist in forensic dentistry with strong background, having the particular technical expertise to preview, for example, the body, or explore cases of sexual abuse by revealing the location of the bites with the teeth.⁶

4. The importance of forensic dentistry in detecting crimes

Identification of an unknown during mass disaster or any criminal activity is one of the main objectives of the medico-legal personnel's.⁷ And The importance of forensic dentistry with regard to the effect of a bite using teeth should be noted, the human bite in sexual crimes is most often observed in the body of the victim or the body of the accused, and the bite is usually seen in the organs responsible for sexual practice, the human bite may appear on the body in the form of a small part of the dental arch (close to the shape of a circle or oval) representing the area between the canines with a small gap on the sides, which is the space between the upper and lower jaws, the bite may be in the form of abrasions, bruises, ruptures or a mixture of that, and the bite sometimes appears in the form of parallel lines as a result of the fangs sliding on the skin from top to bottom for a distance of up to a few centimeters, the impact of the human bite is treated with caution and accuracy from different angles, especially the direct front view angle, in the presence of appropriate lighting, in addition to taking color photos and black and white photos, as well as taking a swab from the bite mark by wiping a wet cotton swab by passing it from the outer edges of the bite to the inside of the bite, another swab shall be taken from another area of the body that has no trace of the bite, the swabs are kept in the freezer until they are sent to the laboratory, and if the capabilities are available, a mold is made for the sting effect by placing a plastic material (rubber or silicone with a substance that stimulates hardening) on the trace of the bite and leave it to harden.⁸

The importance of forensic dentistry also appears by revealing the crimes of torture if tooth biting was used against the victim. By previewing the forensic dentist on the traces of a tooth bite, the culprit and who committed the crime of torture was identified. Accordingly, the details and circumstances of that crime are revealed.⁹

If these possibilities are not available during the autopsy, the part of the skin containing the bite mark can be removed and placed in the freezer so that the trace of the bite can be compared to the accused's teeth, it is also necessary to inspect the accused's teeth to compare them with the mold or the trace on the saved skin, by checking the accused's teeth in the event of a full or partial denture, the number of teeth in the jaws, missing teeth, distinctively broken, or deformed teeth, irregularity of the cutting edge of the teeth, crooked teeth, and the presence of large spaces between the teeth, note that the comparison between the trace of the bite and the teeth of the accused has several methods, while some forensic dentists prefer to compare images of the magnified bite trace of ratio (1: 1) with pictures or drawings of the teeth, the image can be made from a positive mold of the bite mark, in which the cutting edges of the front teeth are inked, transferred to transparencies and placed on the image to determine the degree of compatibility between them, other forensic dentists prefer to use a negative image of the teeth and put it on a positive image of the bite mark, taking into account the degree of magnification between them, and then comparing the compatibility between them.¹⁰ And means the determination of individuality of a person Determination of the identity of an individual is important for civil and criminal matters and to obtain a profile of unidentified dead bodies regarding their age, sex, percentage of bodies that remain unidentified.¹¹

The purpose of the check of the body by the forensic dentist is to find out the cause of death and to indicate the pathological conditions if the person was infected with it before his death concerning his speciality as a dentist, by determining the causes of death from the point of view of forensic dentistry, whether it was a murder, fortuitous accident, or a common disease, as well as determining the time of death and identifying the body if its identity is not known. In order to perform forensic dental tasks, there must be many equipment and tools needed for

checking and dissection purposes, which are both fixed and mobile equipment.²

5. The applications of forensic dentistry in Jordanian law and the judiciary

A forensic medicine report is defined as a written medical certificate related to a judicial matter that deals with the causes, circumstances.¹² And Forensic dentistry has a role in the Jordanian criminal justice methodology so that it is linked to the law and judicial procedures, as well as in the formation of judicial discretion authority in offences related to the dental forensic report.¹³ It is worth noting that the Jordanian legislator has indirectly regulated the mechanism of performing forensic dentistry in detecting crimes, as Article (15) of The Jordanian Medical Constitution, The Duties of The Physician and The Ethics of the profession" stipulated that: "It is not permissible for a doctor to issue a certificate about a deceased person who did not witness his death struggle, or who did not follow up the disease of death before death case unless he is convinced with the cause of death according to his medical experience, and in the suspected criminal incidents, the doctor must inform the judicial authorities, which then has the right to allow to be buried the corpse after preview by a forensic doctor, either phenotypically or anatomically, as the attending physician in criminal cases ending in death shall refrain from issuing a death certificate and shall inform the authorities who have the right to dispose of the incident."¹⁴

Article (39) of the Jordanian Law of Criminal Procedure stipulates the following: "1. If the distinction of the nature and circumstances of the crime is based on knowledge of some arts and crafts, the public prosecutor shall accompany one or more masters of arts and crafts. 2. The court may take urgent measures to verify the health status of the injured or the defendant or verify the validity of the medical reports submitted in the lawsuit without the litigants' request."¹⁵ Also, Article (40) of the same law stipulates the following: "If a person dies by murder or for unknown reasons that raise suspicion, the public prosecutor must seek the assistance of one or more doctors to prepare a report for the causes of death case and the condition of the corpse".¹⁵

It is also noted that the Jordanian penal legislator regulates the liability of the forensic dentist for his report so that the forensic dentist will be criminally liable for any mistake that may occur from

him, given that the report issued by the forensic dentist is one of the important reports that aim to reveal the truth or acquit the accused of the crime.¹⁶ As for the relationship between the forensic dentist and the judiciary, this relationship appears if the dentist deals with an accident involving an oral injury and fractures in the teeth as a result of a car collision, in judicial cases, the forensic dentist will be asked to give his opinion on whether the wound will last for a long time to heal, how long it takes to heal, will the injury leave a distorted effect on the mouth or teeth, the cost of prosthetic industrial works for the cosmetic bridges, and whether the injury will leave a permanent disability such as the adhesion of temporomandibular articular, the judicial role of the dentist is also shown in the forensic dentist's relationship to the corpses, if a corpse is found, the forensic dentist can assist the judiciary by establishing the personality and identity of the corpse, based on the data of the dental card and remedial procedures such as fillings, bridges, partial or complete devices fitted in the mouth and the teeth of that corpse, by matching the data of dental card to what is already in corpse mouth.²

Accordingly, and based on the rulings of the Jordanian judiciary, the Jordanian Court of Appeal in its criminal capacity ruled in its judgment No. (43308/2018) and dated 23 Oct. 2018 by the follows: "In response to all the reasons for the appeal, the result of which was that the Court of First Instance erred in not considering the request by forming a quinquennial committee or a central committee to clarify the patient's condition, which is subject to suspicion and ambiguity, where the regional medical committee consists of non-specialized general practitioner and non-specialized dentist, also, the court erred in declaring that it did not have jurisdiction to consider this case, because the list of accusations issued by the Public Prosecutor, which includes suspicion against all parties on charges of harm, contradicts the provisions of Article (334) of the Penal Law, and the court erred in relying on the medical report issued by the medical committees on 26 Mar. 2018 regarding the patient and that the patient does not have any disability rate because the period of unemployment is two weeks and it is among minor injuries and that the percentage of disability is not commensurate with the duration of the disability and that the medical report is shrouded in ambiguity and contrary to reality".¹⁷

Irbid Magistrate's Court also ruled in its judgment No. (3750/2020) dated 27 Aug. 2020 by the following: "Based on the foregoing, the court considers that through the testimony of the defendants and the initial and conclusive medical report for each of them, the defendants committed the crime of harm attributed, by hitting each other, and the effect of this was proven by the initial medical report organized against the accused...on 5 Feb. 2020 Pains in the head, mouth, back, left thigh, upper limbs, bruises and blue in the hands and feet, pain and difficulty moving, bruises in the back, lower back pain, bruises in the neck, and the duration of unemployment mentioned in the conclusive medical report, which is five days from the date of the initial injury, and the initial medical report organized against the defendant dated 5 Feb. 2020 of pain in the head and neck, and the presence of bruises, hits, cuts, and one day old of two superficial scratches on the left humerus, longitudinal superficial scratches on the neck, and traces of a tooth bite on the right shoulder and redness on the neck, all these signs are an indication that the criminal behavior took the form of beating by pressing on the body tissues, And since the will of the defendants tended to hit each other".¹⁸

6. Conclusion

Through forensic dentistry, the physician can determine the identity, age, and gender of the corpse owner, estimate the period of death, and determine the cause of death. The importance of forensic dentistry is demonstrated by detecting incidents of biting abuse that accompany many cases, such as rape. The necessity of amending the Jordanian Criminal Procedure Law by explicitly stipulating the role of forensic dentistry in detecting crimes.

Adding legal texts to the Jordanian medical constitution regulates the performance of the forensic dentist in terms of the availability of educational qualifications in dealing with criminal cases. Activating the judiciary's role in accrediting forensic dentistry in detecting crimes due to its practical importance and its accurate and rapid results. Expand the role of forensic dentistry in detecting crimes due to the accuracy of forensic dentistry detection and its discovery of things that were not discovered by a forensic physician who is not specialized in forensic dentistry.

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