

Civil liability for Radiation Therapy

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ABSTRACT: *The research dealt with the civil responsibility for radiation therapy, including the definition of radiation therapy and the legal nature of the civil medical responsibility for radiation therapy, as the researcher addressed the legal controls of radiation therapy in Egyptian legislation and French legislation, and then the researcher addressed the stage of radiation therapy, including medical work in the stage of radiation therapy, whether previous or later, and concluded the researcher subject in methods of radiation therapy that result in medical responsibility.*

KEYWORDS: Radiation Therapy, Medical Responsibility, Compensation, Damages, Patients.

INTRODUCTION

Technological development has been linked to many areas, including medical work, which, although it is the reason for the desired development of the treatment of patients, on the other hand, has created legal difficulties in regulating legally advanced treatment methods and controlling the resulting legal provisions such as civil and medical criminal liability, and medically developed subjects and at the level of the law radiation therapy for patients with cancerous and non-cancerous tumors. The draft letter tagged (Civil Medical Responsibility for Radiotherapy) examines the civil liability of the law associated with radiation therapy, which is one of the most important sections of medical physics, which is concerned with treatment using nuclear radiation.

The importance of the subject of research is related to the method of treatment and the possible damage to the patient and his life, medical errors may be made during treatment related to the doctor or who assists the doctor in the treatment, and those mistakes that are often difficult to identify and which pose a significant risk to the patient and his life and which can result from civil medical liability. To what extent can the doctor and medical staff be held accountable or obliged to compensate for such damages? And who is the player to prove it, especially with the difficulty of proving the error? It can also be said that there are limbs that can cause damage to radiation therapy and it is difficult to determine their error, such as those working in the radiation

system of radiation technicians, physicists, and dependents, as well as the responsibility of the hospital where the doctor and medical staff work.

The importance of research:

The research deals with a critical topic due to its attachment to human life, health, and body safety, as well as its association with the most critical profession in Iraq and the world at large, namely the medical profession, and therefore, achieves the responsibility of the treating doctor or workers in the radiation system alike. The research also shows the nature of medical responsibility, including diagnosis and radiation therapy, as medical responsibility has received significant attention from jurists and researchers because medical civil liability is particularly important in the subject of radiation therapy. The scarcity of judicial decisions, the lack of special laws in Jordanian and comparative legislation, as well as the lack of scientific and legal references in this regard, and the absence of previous studies on this subject have led us to consider this subject.

The Research Problem and questions:

The main problem of the research is the erroneous use of ionizing radiation by those who are responsible, whether through diagnostic and therapeutic radiology devices or radioisotopes, which is difficult to prove, leading to their evasion of responsibility and the resulting damage to the patient affecting his life and body integrity. This is made worse by the absence of a special law or instructions governing the controls governing radiation therapy in its medical and legal aspects, as well as its civil liability, particularly with a large number of cancer cases in Iraq in general and Basra in particular.

Many questions that need to be answered result:

1. What are the means of proving medical error in the field of radiation therapy and how is it linked to the causal relationship with the damage done?
2. What is the nature of the obligation that a breach is a mistake leading to the realization of responsibility for damage to radiation therapy?
- 3- How can you determine who is responsible for these damages to the patient, whether it is the doctor who is a radiologist or members of the radiation system?
With a legislative deficiency to address this type of responsibility, how can the general provisions of civil law be adapted to include all the details of this type of civil liability?
- 9- What is the judicial position in practice in terms of such damages to the patient as a result of radiation therapy treatment, whether in Iraq or the laws in question?

Research objectives:

Our research aims to highlight the following:

- 1- Introducing radiation therapy, especially with a large number of cancer cases in Jordan in general, and the duties of the competent doctor and the medical team treated with radiation.
 2. To indicate the nature of the obligation, which is a mistake that leads to the realization of responsibility for radiation therapy?
 - 3- Identity the person responsible for these damages caused to the patient caused by the error with radiation therapy.
 - 4- Research on possible means to prove medical error in this type of treatment and how the judge can use the experts to show the error of the doctor and the medical staff treated or not.
- Assess compensation for damages and consider the possibility of in-kind compensation for damages.
- 6- Research into the shared responsibility of the specialist doctor and the medical team.
 - 7- Research the supposed responsibility for the machines used in medical treatment and thus facilitate the patient's task by assuming error and thus the ease of obtaining compensation.

RESEARCH METHODOLOGY

We will adopt the comparative approach in examining the responsibility of civil and medical for radiation therapy by discussing the views put forward, identifying weaknesses and strengths in legislation, and identifying the difference and agreement between Jordanian legislation and the legislation in question. The descriptive approach is based on the presentation of legal, judicial, and doctrinal texts governing the work of the radiation therapy system, namely radiologist, physicist, and radiologist, as well as damage caused by radioactive materials resulting from diagnosis and radiotherapy of patients andThe two articles considered the responsibility of the hazardous materials guard a supposed responsibility, in addition to using the dominant trend in jurisprudence and the judiciary in France makes the responsibility of the radiologist a supposed mistake, in addition to using the dominant trend in jurisprudence and the judiciary in France makes the responsibility of the radiologist a responsibility without error.

Concept of civil liability for radiation therapy

Medical responsibility has received the attention of jurists and researchers, although the same responsibility is one of the traditional topics, but it is constantly renewed, especially with regard to recent developments in medical equipment and the multiple uses of radioactive isotopes in the treatment of many diseases, so the subject of radiation therapy has been sacrificed from vital topics and worth researching in order to determine the appropriateness and adequacy of legislative and judicial rules in the face of the detachments of scientific development of radiation therapy. The responsibility of the doctor in the field of radiation therapy is of great importance as it

is borne by the treating doctor or radiologist, as determined if the practice of the profession results in damage to the patient as a result of their mistake, and to look at the extent to which they take responsibility for the machines used in radiation therapy, the wrong use of radiation by those who are either through diagnostic and therapeutic radiology devices or radioisotopes and the danger these things pose to the patient, In the absence of special laws regulating radiation therapy controls or including them in medical liability.

Civil liability is a fundamental pillar of civil law, which is the bias of all civil transactions, especially since it revolves around the idea of compensating for damage caused by violation of legal conduct, as well as compensation for personal errors, and in the area of responsibility for radiation therapy in question, we find that there is a common overlap between legal and scientific relations aimed at obtaining radiation therapy within specific controls because of the radioactive materials and radioactive devices that these treatments represent as well. It may result in damages attributable to misuse and care and lack of caution by doctors and specialists in charge of it, hence controls have been put in place whether related to the requirements for the work and licensing of that system, and the places and materials used and the extent of their quality and so on, and therefore the research seeks to discuss what is the civil medical responsibility for radiation therapy.

The concept of civil medical responsibility and the legality of radiation therapy

Civil liability is a fundamental pillar of civil law, which is the bias of all civil transactions, especially since it revolves around the idea of compensating for damage caused by violation of legal conduct, as well as compensation for personal errors, and in the area of responsibility for radiation therapy in question, we find that there is a common overlap between legal and scientific relations aimed at obtaining radiation therapy within specific controls because of the radioactive materials and radioactive devices that these treatments represent as well. It may result in damages attributable to misuse, care, and lack of caution by doctors and specialists.

The word "responsibility" means accountability, and the person "responsible" is asked and held accountable for something (Dahkhoda, 1373). Responsibility as a legal term is for a person to be responsible for their actions and their consequences. The main task of the law in society and all bodies is to prevent the commission of harmful acts and to adopt the necessary measures to compensate for the damage caused. Depending on the type of accountability, the kind of responsibility will vary; if accountability is a matter in plain sight or is carried out before conscience, it is called "moral responsibility", and if accountability is a matter of legislative law, it is called "legal or legal liability".¹

¹ FallahMollahoveizeh and FeysalSaidi, Civil Liability of Cosmetic Surgeons, BY RESEARCH JOURNAL OF FISHERIES AND HYDROBIOLOGY.2015.P.408.

Definition of civil liability

Civil liability: Where an individual is required to compensate for the damages suffered by others, then he or she is said to bear civil responsibility towards the other. In civil liability, the average person incurs losses. Civil liability in this sense, compared to criminal liability, consists of contractual and non-contractual (compulsory) liability. Contractual liability: the task to be carried out due to any violation of contractual obligations, and compensation for damages resulting from infringement (Shahidi, 1382). Anyone who does not meet his obligations in the contract and suffers damages to the other party.²

The civil liability of doctors in the Islamic Penal Code, approved in 1996, may be taken into account. Some of the articles relating to the above law are as follows: • Article 59, Article 2 of the Said Act states: Any type of medical or surgical operation that is legal and performed with the consent of the person, parents, guardian, or legal representatives, taking into account academic and technical standards and government regulations, about urgent cases, does not require the consent of the doctor.³

As such, the French judiciary has obliged the doctor to commit to the patient's vision, which is undoubtedly a new obligation on the doctor's shoulders, and therefore, the doctor has been made to demonstrate his loyalty to the obligation to be insightful for the benefit of the patient. At the legislative level, the same obligation was frequently provided for in articles 1111.2 and beyond.⁴

It is noted in this part of the law that the patient has become the beneficiary and therefore his rights to the doctor are stated in a section entitled, "The rights and responsibilities of the beneficiaries". As such, article 1111.2 of the French Civil Regulation states: ("Every person has the right to be insightful regarding his or her state of health"), and the first paragraph of the same article, it sets out the subject matter of this obligation.⁵

The conventional meaning of the civil liability of the doctor

El-Tayeb is the person authorized to carry out medical work under the law under the established rules in the science of medicine, where the Prophet says: "Whoever is a doctor and does not know who is a guarantor", and with the multidisciplinary medical specialty, complex medical problems must be referred to the specialists, and Allah

² FallahMollahoveizeh and FeysalSaidi, Civil Liability of Cosmetic Surgeons.IBID.p.412.

³ FallahMollahoveizeh and FeysalSaidi, Civil Liability of Cosmetic Surgeons.IBID.p.412

⁴ F. Bellivier, Chroniques de la législation française, RTD civ., n3, 2002, P.582

⁵ F. Bellivier, Chroniques de la législation française. Op.cit.p.582

Almighty says: "Ask the male people if you do not know" Or punishment for exceeding the law that controls the limits of what he is forbidden to do,

The legal meaning of the civil liability of the doctor

Since the responsibility is that the person is responsible for his personal action and that general rule, which has been legalized in most civil laws and stipulated in the French Civil Code in the article (1382), states: that any act that occurs from a human being and causes harm to others, the person who has the effect of the act harmful to his sin must compensate for this harm.

This is what article (163/1) of the Egyptian Civil Code says: Any mistake that causes harm to others requires the perpetrator to compensate, as well as article (256) of the Jordanian Civil Code stipulates that: any harm to others is obliged to do compensation, even if it is not distinctive.⁶

The legal nature of civil medical liability for radiation therapy:

Civil liability is either a contractual liability or a default liability and a contractual liability is a liability arising from a breach of obligation originating from the contract.⁷ Default liability is the person's obligation to compensate for damages arising from his personal act or the act of those under his or her care or supervision of persons or followers or under the effective control of the animal, construction, or other non-living objects within the limits established by law.⁸

The availability and conduct of liability, whether complex or default, requires three pillars error, damage, and causal relationship. The Egyptian Court of Cassation ruled in a ruling that the existence of a dependency relationship between the doctor and the management of the hospital where the patient was treated, even if it was a moral dependency relationship, the responsibility of the hospital was the responsibility of the doctor' line.⁹

Definition of radiation therapy

Radiation is defined as electromagnetic waves emitted from the radioactive source carrying or is: the phenomenon of the emission of radiation from natural and industrial

⁶ Texts of articles (163) Egyptian civilians, and article (256) Jordanian civilians.

⁷ SAED. Abdul Wahab Arafa, Civil Responsibility in light of jurisprudence and cassation, Volume 1, Streptial Responsibility and Compensation, Technical Office of Legal Encyclopedias, Alexandria, under his age, p. 25

⁸ Dr. Abdul Majid al-Hakim, and others, The Theory of Compliance in Iraqi Civil Law, Part 1, Sources of Commitment, Press of the Ministry of Global Education and Scientific Research, Baghdad, 1980, p. 198

⁹ Egyptian Civil Cassation, Session 6/22/1936, Appeal No. 24, Q6 S, Set of Legal Rules of the Court of Cassation, Part 2, p. 972

sources of energy from one place to another and the radioactivity of radiological sources¹⁰.

Methods of radiation therapy

External teletherapy:

This type of treatment is used by about 90% of cancer patients in radiation therapy departments, it features a radiation pack from the outside, and the source of the package is located at a distance from the patient

Article (R-34-59) of Decree No. 270 of March 24, 2003

About (80 to 150 cm), given during the cobalt unit that provides high-energy gamma rays or linear accelerator, for four to eight weeks.¹¹

Egyptian legislation

Article (4) of Law No. 7 of 2010 on the regulation of nuclear and radiological activities states: "Ionizing radiation may only be used in any capacity except for those who are authorized to do so and the ionizing radiation in the provisions of the Act means radiation from radioactively active substances or machines such as X-ray machines, reactors, accelerators, and some other radiation."¹²ⁿ.

From that material, the researcher concludes that ionizing radiation is produced from industrial sources such as diagnostic radiology devices such as (regular radiology devices - mammograms - CT scans) which are used in the diagnosis of pathological conditions, and treatments devices with a large capacity of such devices as (linear accelerators used in the treatment of cancer tumors) and other radiation such as cobalt resulting from gamma rays, which the law specified control its use

French legislation:

French legislation in Chapter III of ionizing radiation came with the text of article (L.1333.1) activities that involve risks as a result of human exposure to nuclear radiation, including atomic activities produced from an industrial source such as devices or a natural source such as radionuclides, fissile or enriched materials and to prevent or reduce the risks of a radiation accident or environmental pollution pocket fulfilling the following principles: ¹³

¹⁰ Article 2 of Jordan's Nuclear Energy and Radiological Prevention Act No. 14 of 1987.

¹¹ Dr. Hanem Abdel Fattah Saqr, Principles of Oncology and Radiotherapy Technology, P

¹² Law No. 7 of 2010 on the regulation of nuclear and radiological activities.

¹³ <https://www.legifrance.gouv.fr/affichtexte.do?cidtexte...id 3/3/2015.20:30PM>

1. Nuclear activities may be interfered with or exposed to or carried out by persons, particularly in the health, social, economic, or scientific sphere, if they are justified by the benefits they provide to subject persons.

Human exposure to ionizing radiation from these activities or interventions must remain as low as possible.

Exposure to the dose must be within limits set by law unless such exposure is in 3 of March 24, 50) of Decree No. 270 -medical or biomedical research. Article (R-43 2003, on the protection of persons exposed to ionizing radiation, states that this substance applies to persons who have been exposed to diagnostic or therapeutic radiation for medical purposes for a specific disease, persons voluntarily participating ".in the biomedical trial program, and persons exposed during forensic procedures.¹⁴ In fact, in the relationship between equal friends, not between the patient and the doctor, the law provides for a person's right to all information that you see concerning the professional. Needless to say, article 1114 paragraph 1 has two primary consequences: on the one hand, the doctor must commit himself to respect the will of the person, even if the life of that same person is at risk because in such a case the law only imposes an obligation on the doctor by means.¹⁵

Medical work in the pre-radiation treatment phase

At this stage, I mean the first contact between the doctor and the patient, in which the doctor tries to identify the patient's health and psychological condition to help him treat and heal him. Traditionally, this period includes two important phases: medical examination and diagnosis

Radiotherapy examination phase

A medical examination is the beginning of the effort and work done by the doctor, and the patient's health condition is ostensibly examined, by observing clinical signs and evidence such as the patient's appearance and body. The doctor may use some laser and radiation devices, medical machinery, and equipment such as a medical headset and a pressure gauge. The aim of the examination is to verify the existence of certain signs or phenomena that will help the doctor make the appropriate diagnosis of the disease. If you are unable to reach the diagnosis of the disease through simple tools, your doctor can resort to more thorough and in-depth examinations, such as medical analysis, radiology, and endoscopies.¹⁶

¹⁴ Article R-43-50 of Decree No. 270 of March 24, 2003, on the protection of persons exposed to French ionizing radiation.

¹⁵ Article (R-43-50) du décret n° 270 du 24 mars 2003

¹⁶ Dr. AsaadObaid Al-Jumaily, Error in Civil Medical Responsibility, Comparative Study, Amman, Culture Publishing and Distribution House, 2009, p. 241; Dr. Ramadan Jamal

Accordingly, the medical examination is carried out in two phases:

The first is the stage of preliminary medical examination, in which the doctor uses his or her hand, ear, or some simple equipment, which is necessary before resorting to any treatment.

The second is the stage of supplementary medical examination, in which the doctor performs deep examinations using modern devices to show the patient's¹⁷ condition, such as analysis, imaging, and planning devices. This stage is translated into the evidence obtained from the preliminary examination, and the results are extrapolated to develop an accurate diagnosis of the disease.¹⁸

The French Court of Cassation concluded that compensation for the accidental medical accident does not, therefore, fall into the area of obligations contracted by the doctor with his patient. As for the definition of an accidental medical accident, it lies in the medical risk that is close to medical work, which cannot be controlled. Nor did the Court of Cassation uphold a result in care work to compel the doctor to compensate for damages, which were not related to the error.¹⁹

It should also be said that medical sciences are still evolving and that the methods of diagnosis and treatment are controversial among scientists, in this regard the French Court of Cassation ruled that as long as we are in a situation still in front of scientific research, the doctor does not ask if the error in the diagnosis is due to a trade-off of scientific opinion on another.²⁰

French law has concerned the diagnosis with medical work, which entails criminal liability for the illegal practice of medicine, where it is possible to draw out how to make a diagnosis through the text of article (L).4161-1 of the Public Health Act, where

Tamil, Responsibility of Civil Doctors and Surgeons, Cairo, National Center for Legal Publications, 2005, p. 29.

¹⁷ Dr. Hisham AbdelHamid Faraj, Medical Errors, Alexandria, Al-Fajr Publishing and Distribution House, 2007, p. 115

¹⁸ Ben Marouf Mandel, Influence of the Principle of Caution in distributing the burden of proving medical error in the field of civil liability, Master's degree, Faculty of Law, Tlemcen University, 2011-2012, p. 70.

¹⁹ op.cit. P. 16

²⁰ Decision of the French Court of Cassation on 09/05/1967, quoting: Dr. Wafa Helmi Abu Jamil, Medical Error, Cairo, Arab Renaissance House, 1987, p. 52; Talal Ajaj, Civil Responsibility of the Doctor, Tripoli Comparison Study (Lebanon), Modern Book Foundation, First Edition, 2004, p. 261

personal work can be carried out, oral or written consultations and in any way whatsoever ²² After him for the child.²²

Radiation therapy monitoring phase

Some legislation did not explicitly provide for it as a stage or as an element of medical intervention, including French and Egyptian laws. Neither the French Medical Ethics Act nor the List of Egyptian Medicine Literature explicitly provided for therapeutic control as a stage of medical intervention.²³

The researcher believes that the Jordanian, French, and Egyptian judiciary did not follow in the footsteps of their legislators in ignoring the reference to censorship as a stage of medical intervention, the Jordanian, French and Egyptian judiciary considered therapeutic supervision a stage of medical intervention, and this were clearly reflected in the rulings and decisions of the courts of the two countries.

The French judiciary took precedence in this regard, as the French courts have upheld the responsibility of the doctor for negligence in the patient's control, which has exacerbated his illness.²⁴

²¹ Article L4161-1 CSP : « Exerce illégalement la médecine: 1° Toute personne qui diagnostique... par actes prend part habituellement..., à l'établissement d'un personnels, consultations verbales ou écrites ou par tous autres procédés quels qu'ils soient, ... ». The French legislator also obliged the doctor to complete his diagnosis very carefully, take the necessary time and use all possible scientific approaches.

-Article R4127-33 CSP : « Le médecin doit toujours élaborer son diagnostic avec le plus grand soin, en y consacrant le temps nécessaire, en s'aidant dans toute la mesure du possible des méthodes scientifiques les mieux adaptées et, s'il y a lieu, de concours appropriés ».

The previous Public Health Act (Order No. 76-777 of October 23, 1976) contained an article in the same content as the previous article of French law, Article (409) which stated: "The doctor must always put

Diagnose it with attention, without calculating the time it spends on this work. If he or she is required to use as possible more knowledgeable advisers and more appropriate scientific methods, and after the doctor has put his accurate diagnosis with his or her conclusive decision, especially if the patient's life is in danger, he or should make an effort to enforce his decision." To indicate that there is no similar provision to this article in the health law currently in force (85-05).

²² Article L2131-1 CSP: « I.-Le diagnostic prénatal entend des pratiques médicales, y compris l'échographie obstétricale et foetale, ayant pour but de détecter in utero chez l'embryon ou le fœtus une affection d'une particulière gravité ».

²³ Ahmed Abdul Karim Musa Al-Sarira, *ibid* , p. 40.

²⁴ Paris 26 nov 1968 .D.1969 .Som 72

As for the Egyptian judiciary, his position was evident in the ruling of the Egyptian Court of Cassation issued on April 11, 1973, which ruled that the doctor was responsible for his mistake because of his violation of scientific assets and surgery of the patient in the eyes together, in addition to not taking sufficient precautions to secure the result of the operation, resulting in the patient losing full sight of his eyes.²⁵

As for Islamic law, the stage of monitoring treatment was considered part of the medical intervention, and the doctor should monitor the patient until the end of the treatment and make sure that there are no complications.

Radiation therapy phase

First: The stage of treatment comes immediately after the stages of examination and diagnosis, in which the doctor describes with humiliation all the necessary care and sincere efforts, treatment, or medicine, that he sees fit for his patient according to the results of the examination and diagnosis. In order to heal the patient or relieve his pain. Some jurists went on to define treatment by saying: "Treatment is the means to cure the disease, reduce its risks or alleviate its resulting pain, whether by relieving it or eliminating it."²⁶

It was further defined as: "A procedure issued by a licensed doctor, following the diagnosis, which includes work to eliminate or reduce the disease."²⁷

The Paris court has defined the treatment as "every procedure, whatever it may lead to the patient's recovery or the condition."²⁸

French legislation, and neither the Egyptian nor Jordanian counterparts, has explicitly defined treatment in all their legal provisions relating to health and medical practices, but the term treatment has been mentioned in many articles. In French legislation, the term treatment is mentioned in article 372 of the Public Health Act of 1945, amended

²⁵ The cassation of February 11, 1973, the set of rulings of the Egyptian Court of Cassation, S. 24 No. 40, p. 180. He referred to it; Nasr al-Din Mrouk, previous reference, p. 291. as well; Ahmed Abd al-Karim Musa al-Sarayrah, previous reference, pg. 40.

²⁶ Referred to by NasreddineMarukibid , p. 287.

²⁷ Dr. Murad Ben Saghir, Medical Error under civil liability rules, Doctoral Thesis, Abu Bakr University, Belkaid University, 2010 Tlemcen Faculty of Law and Political Science, p. 289

²⁸ Paris 15 Mars 1899 S.1899-2-176- referred to it, Youssef Juma Yusuf al-Haddad, criminal responsibility for doctors' errors in the criminal law of the United Arab Emirates, Al-Halabi Human Rights Publications 2003 p. 58.

in 1953,²⁹ but in Egyptian legislation, the term treatment is mentioned in article 20 of the Code of Ethics.³⁰

As the doctor provides treatment to his patient, the doctor should be aware of all information about his or her medical history. John PinoJ.Penneau noted that the doctor should "know the patient's history and specifics, take care of that, take into account the medications given to the patient in the past, and see the tests and tests that have been done to the patient before or else he will be responsible."³¹

Medical work in the stage of radiation therapy

After completing the diagnosis, the doctor moves to the treatment stage, and determine the appropriate methods and methods of treatment, which repel the achievement of healing as much as possible. The patient's right to treatment is essential, and a fundamental human right, such as his or her life and body safety, so the treatment phase is the decisive and essential stage for the patient after making the appropriate diagnosis.³²

Treatment is defined as the means chosen by the doctor, leading to the recovery, reduction of risk or reduction of the resulting pain, whether by either being able to recover or eliminate the disease. The French judiciary also defined it as any procedure that leads to recovery from the disease or alleviation of the condition.³³

Some researchers also defined it as "a procedure issued by a licensed doctor following the diagnosis, which includes work to eliminate or reduce the disease."³⁴

²⁹ Art No372 du Code de la santé publique stipule que "exerciceillégalement de la médecine tout personne qui prend par habituellementou par direction même en présence d'un la médecinal'établissement d'un diagnostic outraitement de maladies ".

³⁰ Article 20 of the Regulations of Ethics issued by Ministerial Decree No. 238 of 2003 on September 5, 2003, states that "the doctor must do everything in his power to treat his patients, work to alleviate their pain, improve their treatment and equalize them in care without discrimination."

³¹ Mohammed Rice, Scope and Provisions of Civil Liability and Proof, Den Year of Publication, p. 82.

³² Mansour Mostafa Mansour, "Patient's Rights over a Doctor", Journal of Law and Sharia, Issue II, June 1991, Kuwait University, p. 24; Ben SaghirMurad, Medical Error under civil liability rules, Doctoral Thesis, Faculty of Law, Tlemcen University, 2010-2011, p. 2980.

³³ NasreddineMaruk, Criminal Protection of the Right to Body Safety in Kuwaiti Law, Comparison and Islamic Law, State Doctorate in Criminal Law, Institute of Law, University of Algeria, 1996-1997, p. 295.

³⁴ Saad Salem Al-Asbali, Civil Responsibility for Medical Activity in Libyan Law, Qaryounis University Publications, 1994, p. 151.

French law did not provide for a specific definition of treatment and only used the term in the fold of its legislation.³⁵.

Post-stage medical work on radiation therapy

Your post-radiation doctor's work is to monitor and follow up on the patient, especially if the work is surgical. Medical supervision is one of the most important stages of medical intervention because it results in proper realization to reach the patient's recovery, especially after the surgery, as the good and sound control of the patient depends on the success or failure of the previous medical work as a whole.³⁶

One of the judicial applications was the decision of the Poitiers Court to convict the doctor causing the death of a woman after he prescribed her serious treatment without an earlier examination and the direct follow-up of the effects of the prescribed treatment.³⁷The French judiciary has even expanded the doctor's obligation to monitor him by condemning him for not being sure for him to follow up on the treatment and the patient's implementation of the instructions he has given him, so the doctor is responsible here for the damage done to the patient.

The doctor's commitment not only stops after the radiation surgical intervention but also extends to the need to follow up with the patient until he wakes up from his coma and gets rid of the effect of the drug or radiation therapy. Neglect of this aspect can have serious consequences for the patient³⁸, and complications of surgical intervention often appear after the doctor has finished surgery, as it has been observed in practice that the deaths of surgically treated patients rarely occur above the surgical table and are often far away³⁹. The French Court of Cassation has argued that the phase of

³⁵ The term "treatment" has been mentioned in more than one place in French health law, particularly in the text of the article (L4161-1) relating to the statement of acts of the illegal practice of medicine. In Kuwaiti medical law, treatment is provided in article (195) B.H.S.T. and states: "Doctors, pharmacists, and dental surgeons must do the following: ensure the protection of the health of the population by providing them with appropriate medical treatment." ».

³⁶ MarukNasreddine, criminal protection of the right to body safety. *ibid*, p. 297.

³⁷ Court of Potiers Of Tarekh 23 March 1972; mentioned by: Dr. Mohammed Sami Shawa, medical error before the criminal judiciary, comparative study in the Egyptian and French courts, Cairo, Arab Renaissance House, 1993, p. 94.

³⁸ Dr. Abdul JabbarNaji Al MullaSaleh, Doctor's Obligations in Surgery, Research presented at the First Scientific Conference on Medical Errors, Jerash University, Jordan, 1999, p. 22.

³⁹ Dr. Mohammed Hassein Mansour Medical Responsibility, Alexandria, University Think Tank, 2006, p. 106; HaruziEzzedine, Civil Liability of the Doctor, Surgeon, *ibid*, p. 148.

supervision and supervision continues until the patient regains full consciousness and full vital body functions.⁴⁰

Methods of radiation therapy that result in medical responsibility:

There are a number of errors that have been complained about by the plaintiffs against the radiologist, including failure to diagnose, and errors in multi-faceted radiation diagnosis, these errors may be caused by poor technique, cognitive failure, lack of knowledge and miscalculation, and the research seeks to address those errors :that are responsible as follows

First: Imaging errors in the interpretation of the film radiology:

good photography with specifications results in clarity of the parameters of diagnosis and access to the radiologist to the correct reading of the radio film, 22⁴¹and reading the radiation images in an unreal way and used by doctors, which draws the abandonment of the old radiation examination that leads to damage to the patient, and there are methods of imaging including computer tomography and MRI, and the method of tomography of the positron emission and ct scans of the single-photon emission, The two methods can be combined, and the specialist follows the examination work until the results are reported to the doctor.⁴²

The statement of the examination, and clarify the information of the radiation examination of the patient, and then conduct the examination, and then explain the pictures obtained, and can be transferred to another colleague, until he writes the report and is specified in the name of the patient and a historian and a site of the specialist and be in a clear and understandable manner, and includes a conclusion, and deliver this to the attending physician, which is stipulated in article (L.1111-7) of the French Health Act, There are mistakes for which a radiologist can be prosecuted:

A- Monitoring errors: in the sense of error in highlighting the scan or not using contrast materials, not focusing on the intended area, and not identifying them.⁴³

⁴⁰ The decision of the French Court of Cassation on April 11, 1984, mentioned: Ahmed Hassan al-Hayari, civil liability of the doctor in light of the Jordanian legal system and the Kuwaiti legal system, Amman, Dar al-Culture, first edition, 2008, p. 125.

⁴¹nolantw. System changes to improve patient saety ..BMj .2000. 320:771-773. - sevices R evpauansaludpallica . 2006.20 (2/3): 44103 .

⁴² MACSF ,www. fr/ Responsabilité-professiounelle/acts-de-soins-et techniquemédicale/responsabilite radiolgue.08/08/2021.10:15AP.

⁴³ Whang JS, Baker SR, , Patel R, , Luk L, , Castro A, 3rd. The causes of medical malpractice suits against radiologists in the United States. Radiology 2013; 266: 548.

B- Decision-making error: i.e. not focusing on the location of the disease and distracting attention to another part.

C- Errors of interpretation of the radiology film: it is specific to the misreading of the film, and may be attributed to many reasons including the element of suspicion of a defect, the presence of a defect in lighting, the level of alertness, and others.

D. Not to suggest the following appropriate action: the specialist must attach their suggestions and recommendations on any additional appropriate radiation procedures .and related important information to explain, confirm or exclude the initial impression

E- Not to call in time to deliver the results: this means slowly delivering the written report to the attending physician. ⁴⁴

Comparative legislation, including US, Canadian, English, Danish, and Dutch legislation, included other errors for the radiologist, including the absence of a diagnosis of lung cancer, as well as the absence of a diagnosis of breast cancer and early detection.⁴⁵

The judicial practice has traditionally determined these errors, on the issue of malpractice against the radiologist, including also the responsibility for not contacting the attending physician in a timely manner and others.⁴⁶

CONCLUSION

The issue of radiotherapy responsibility has not been widely researched concerning the subjects of civil law, and despite the enormous benefits of radiation, many problems may cause several patients to become infected with radiation resulting from these tests, although rare, they may cause serious problems, and these problems are caused by the failure to properly manage radioactive resources, causing some patients to develop radiation doses that exceed the limit.

The most important of which is the lack of special laws in Egypt that take responsibility for radiation therapy and the role of the radiologist in this responsibility, the scarcity of judicial rulings that determine the mistakes of the radiologist, and the system that works with him, and the failure to determine the value of compensation. So I turned to the

⁴⁴ Pinto A, Brunese L. Spectrum of diagnostic errors in radiology. World J Radiol 2010; 2: 377–83.

⁴⁵ Raskin MM. Survival strategies for radiology: some practical tips on how to reduce the risk of being sued and losing. J Am Coll Radiol. 2006;3:689–693

⁴⁶ Berlin L. Malpractice issues in radiology. Possessing ordinary knowledge. Am J Roentgenol. 1996;166(5):1027-1029.

laws that regulate the guardian's primary responsibility for materials that require special attention in their guard, such as radiology and radioisotopes, which are considered non-living objects and endanger the patient; if we do not take the necessary care and care in their operation, and we take into account article 178 Egyptian civilians and article 1242 French civilians at the current rate.

Recommendations.

- 1- We call on the Jordanian legislator to enact integrated legal legislation regulating medical liability, taking into account the nature of medical work, and returning certain mistakes, such as Islamic law, within borders.
2. To regulate special legislation or to be attached to integrated legislation hoped for in medical liability, explaining radioactive materials and treatment methods, whether using radioactive devices or radioactive isotopes,
3. Determining the responsibility of each individual in the system dealing with radioactive materials, the need for a medical file for the patient to record radiation tests and the number of radiation doses that the patient has been subjected to, while requiring health institutions not to use X-rays. Machines that have passed for more than ten years, and those radiology devices, whether diagnostic or therapeutic, contain the calculation of the radiation dose that the patient was exposed to during the radiation test.
- 4- The formation of professional committees of medical people in different disciplines and the law before bringing medical lawsuits to the space to help inform the judge of access to fair provisions that protect doctors, and preserve the rights of those affected.

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