MALPRACTICE IN OBSTETRICS AND GYNECOLOGY CASE REPORT AND LITERATURE REVIEW

Dan PERJU-DUMBRAVĂ[*]
Daniel MUREȘAN[**]
Carmen-Corina RADU[***]
Ovidiu CHIROBAN[****]
Raul SÎNTĂMĂREAN[*****]
Daniel URECHE[******]
Radu-Bogdan DAVIDESCU[*******]

Abstract

The present article seeks to conclude the impact of the inaccurate medical care within the obstetrics (OB) and gynecology (GYN) practice, its social and professional effects and the most often flaws met in daily praxis, through the following objectives: A comparison between different studies conducted around the globe, regarding the amount of liability claims in OB-GYN compared with other medical specialties; the public health and financial implications derived from these and the impact upon the doctor – patient relationship. Another objective was to asses a brief classification of stages within the OB and GYN medical act where mistakes may be committed. The paper presents also a summary of the specific incidents that are at high risk for malpractice claims in both OB and GYN and a classification approach to identify the legal liability (criminal or civil) of the medical staff and the forms of medical guilt – exemplified by case reports in the archives of the Institute of legal Medicine Cluj.

Key Words: *Malpractice / obstetrics / gynecology / social impact / professional impact*

JEL Classification: [K32]

1. Literature review

a. Definition, depiction, classification

Gynecology is the medical specialty that deals with the health of a woman's reproductive organs, internal and/or external, and the breasts.[1] Whereas obstetrics,

[*] Professor, Ph. D., "Iuliu Haţieganu", University of Medicine and Pharmacy Cluj-Napoca.
[**] Professor, Ph. D., "Iuliu Haţieganu", University of Medicine and Pharmacy, Cluj-Napoca.
[***] Associate Professor, Ph. D., Oradea University, Faculty of Medicine and Pharmacy Oradea, Bihor county department of forensic medicine.
[****] Assistant Lecturer, Ph.D., "Iuliu Haţieganu", University of Medicine and Pharmacy, Cluj-Napoca.
[*****] MD "Iuliu Haţieganu", University of Medicine and Pharmacy, Cluj-Napoca.
[******] MD "Iuliu Haţieganu", University of Medicine and Pharmacy, Cluj-Napoca.
[*******] MD "Iuliu Haţieganu", University of Medicine and Pharmacy, Cluj-Napoca
[1] F. Marcu (2008), *Marele dicţionar de neologisme (ediţia a X-a revăzută, augmentată şi actualizată)*; Saeculum Publishing House, ISBN 9789738455269.

is the surgery filiations that deals with pregnancy and birth and also providing assistance during parturition and during the afterbirth confinement.[2] In the daily practice, the two, form the medical practice known as Obstetrics and Gynecology (OB-GYN), with a common training curriculum.[3] In the law of torts, malpractice is an instance of negligence or incompetence on the part of a professional. Types include: * legal malpractice – a lawyer's failure to render professional services with the skill, prudence, and diligence that an ordinary and reasonable lawyer would use under the same circumstances. * medical malpractice – a doctor's nonsuccess to exert the degree of care and skill that a physician or surgeon of the same medical specialty would use under the same conditions.[4]

Hence, the malpractice emerged during the medical care (we shall also refer to it as medical guilt), may be considered as a professional error which creates a gap in the standard medical assistance, thus leading to a prejudice (damage) enticing the professional civil liability (not only) of the health care personnel. The damages may be caused by human error, negligence, imprudence, lack of medical knowledge, competence overrun, regulation nonobservance of confidentiality and the informed consent.[5] The professional medical liability represents the compulsoriness of a licensed medical doctor, to answer to his actions. This could be civil, criminal, administrative and/or disciplinary. The doctor does not answer for the damages resulted from: improperly working conditions, insufficient endowment of the diagnostic and treatment equipment, vicious equipment and devices, hospital infections, medicine adverse effects, and generally accepted complications and risks of the investigation and treatment.[6]

Medical and/or law classification of the medical malpractice includes as most comprehensive the following two complementary displays:

From the French jurisprudence point of view of the medical error is divided in:

- Errors against the medical sciences
  - Diagnostic, oversight, technical, treatment
- Errors against medical knowledge
  - Confidentiality, informed consent, care refuse, care discontinuity [6]

Simultaneously the medical guilt can be divided in:

- medical guilt by commission – the doctor does what he shouldn't do – (in agendo)

---

[2] Academia română, Institultul de lingvistică Iorgu Iordan (2009) *Dicționar explicativ al limbii romane*; Univers Enciclopedic Publishing House; ISBN 9786069215975.

[3] https://www.abog.org/new/default.aspx *Certification of Obstetricians and Gynecologists* accesed April 2016.

[4] Garner BA, ed. *Black's Law Dictionary.* 7th ed. St. Paul, MN: West Group; 1999.

[5] R. M. Simion, 2010, *Malpraxisul medical: oportunitate sau realitate*; Humanitas Publishing House, ISBN 978-973-50-2781-0.

[6] G. A. Năsui, 2010, *Malpraxisul medical-particularitățile răspunderii civile medicale*, Universul Juridic Publishing House, ISBN 978-973-127-418-8.

- incompetence, negligence, imprudence, shallowness
- medical guilt by omission – the doctor does not do what he should do - (in omitendo)
  - medical care refuse, absence of the informed consent[7]

b. Worldwide studies

An ACOG (American College of OB-GYN) survey from 2006 shows that 89% of the responders reported at least one malpractice law suit in their career. [8] Also in the USA, OB-GYN it is declared as the medical specialty with the most law suits [9] with an 8 times higher risk than psychiatry [10] and with a four times rise in compensation costs from 1975 to 2000 [11]. As for the exact cost of the medical malpractice insurance, the Office of Legislative Research from Connecticut, revealed that the average sum for the premium insurance was 80k $ for OB-GYN, compared to surgery – 40k $ and internal medicine – 10k $.

A study from Japan, conducted on 64 possible cases of malpractice regarding the prejudice brought to the newborn during the act of birth, from which 32 cases were with cerebral palsy, 4 deaths before birth, 10 deaths after birth, and 18 deaths during the first month of life, showed that 70% required forced delivery of the placenta, 45% required inducted labor. 44 cases were reached the court room. [12]

In China was reported a high incidence of malpractice charges against the doctor's behavior during the pregnant woman consult (professional misconduct). Other reasons for malpractice charges met were: false c section instructions, failure to apply surgical protocols, and antiseptic protocols. 37% of the cases that reached the inside of a court room were declared surgical technique errors and emergency management errors. [13]A study conducted between 2000 and 2009 in Australia and

---

[7] V. Iftenie, D. Dermengiu, *Medicină legală – Curs universitar*, Ediția 2. (2014), C.H. Beck. Publishing House, ISBN 978-606-18-0351-4.

[8] N. Wilson, A.L. Strunk, *Overview of the 2006 ACOG Survey on Professional Liability*, The American College of Obstetricians and Gynecologists, 2006.

[9] D. M. Studdert, M.M. Mello, A.A. Gawande, T.K.Gandhi, A. Kachalia, C. Yoon, A.L. Puopolo, T.A. Brennan, *Claims, Errors, and Compensation Payments in Medical Malpractice Litigation*, The New England Journal of Medicine 354 (2006): 2024-33.

[10] M. I. Taragin, A.P. Wilczek, M.E. Karns, R. Trout, J.L. Carson, *Physician Demographics and the Risk of Medical Malpractice*, The American Journal of Medicine 93 (1992): 537-42.

[11] M. Pearlman, *Patient Safety in Obstetrics and Gynecology An Agenda for the Future*, The American College of Obstetricians and Gynecologists 108 (2006): 1266-71.

[12] N. Uesugi, M. Yamanaka, T. Suzuki, F. Hirahara, *Analysis of birth-related medical malpractice litigation cases in Japan: review and discussion towards implementation of a no-fault compensation system*. J Obstet Gynaecol Res. 2010 Aug;36(4):717-25. doi: 10.1111/j.1447-0756.2010.01240.x.

[13] M. Zhou, Y. Huang, Z.H. Deng, *Analysis of 82 forensic expertise cases on medical disputes in obstetrics and gynecology*. Fa Yi Xue Za Zhi. 2009 Jun;25(3):192-4.

New Zeeland shows that from 485misbehaviour complaints against doctors, 224 of the accused were obstetric-gynecologist. The most often met indictment was sexual harassment, in 24% of the cases; 2nd – unethical prescription in 21% of the cases. Other included disagreeable attitude, inadequate language, and shallowness. There had been a medical license temporary suspension rate of 43% and in 22% of the cases the court considered essential a financial compensation of the patient's physical or psychological prejudice.[14]

▪ A retrospective study conducted in Marsillia regarding medico-legal cases from a hospitals OB-GYN department, between 1997 and year 2000, held 59 defined cases as malpractice from 197 initial complaints. 53 of which were cases of obstetrics and the rest of 6 were gynecology cases. In comparison with 1999, in the year 2009 the relative number of complaints was 3 times higher. 54% of the cases necessitated a court law or mediation between the part. 68% of the cases ended with disciplinary sanctions against the doctor. The most often reported prejudice was uterus tearing.[15]

▪ Also a retrospective study, but this time conducted in Saudi Arabia, held 293 cases declared as malpractice, from which 29,7% were cases regarding OB-GYN. From the 635 defendants 90% were doctors and 7% were nurses. The errors were: negligence (45%), incompetence (14%), surgical errors (10%) and administrative errors (6%). The study identified as the most trusted predictor of guilt, the type and gravity of the prejudice. [16]

A prospective study from Catalunia, Spain, conducted between 1986 and 2010 tried to identify the relevant factors implicated in the professional liability complaint from OB-GYN. After analizing 885 initial complaints, only 48% were declared a prejudice and were the object of compensation, from these 37,7 were mediated outside the court room. The average cost was between 67k and 91k euro equivalent, being higher for obstetrics. Labour, birth and the delivery of the placenta were the reason of 33.1% of the complaints; 12.77 were attributed to the c section; the rest were attributed to complications of the oncological pathology, histerectomy complications, fetal death, perinatal death. [17]

---

[14] KJ. Elkin, M.J. Spittal, D.J. Elkin, D.M. Studdert, *Doctors disciplined for professional misconduct in Australia and New Zealand*, 2000-2009. Med J Aust. 2011 May 2;194(9):452-6.

15 R. Shojai, F. Bretelle, C. D'Ercole, L. Boubli, M.D. Piercecchi, *Litigation in obstetrics and gynaecology: experience of a university hospital in France*. J Gynecol Obstet Biol Reprod (Paris). 2013 Feb;42(1):71-5. doi: 10.1016/j.jgyn.2012.05.009. Epub 2012 Jun 27.

[16] B.Y. Henary, O.A. Al-Yahia, S.A. Al-Gabbany, S.M. Al-Kharaz, *Epidemiology of medico-legal litigations and related medical errors in Central and Northern Saudi Arabia. A retrospective prevalence study*. Saudi Med J. 2012 Jul;33(7):768-75.

17 E.L. Gómez-Durán, J.A. Mulà-Rosías , J.M. Lailla-Vicens, J. Benet-Travé, J. Arimany-Manso, *Analysis of obstetrics and gynecology professional liability claims in Catalonia*, Spain (1986-2010). J Forensic Leg Med. 2013 Jul;20(5):442-6. doi: 10.1016/j.jflm.2012.12.006.

A fifthteen year study from Norway analized the requests for compensation, derived from neurological sequelae or death, caused by birth hypoxia. From a total of 315 complaints, 161 were declared as medical malpractice and recieved compensation. 107 newborns survived from which 96 sustained neurological impairment and 54 died. Human was the main cause of newborn undercare, as it follows: inadequate fetal monitoring (50%), lack of knowledge and/or clinical skill (22%), noncompliance with clinical guidelines (11%), failure in referral for senior medical assistance (10%), error in drug administration (4%). administrative errors (3%). From the personnel point of view, the obstetricians were held responsible in 49% of the cases, in 46% of the cases it was the midwife, whereas the management in only 5% of the cases. [18]

In a study in Germany, 232 cases of court declared (Kassel and Marburg) medical malpractice were analized to determine the cause of the error and the legal qualification, OB-GYN was ranked 4th as incidence (7.8% n=18), following orthopedics, dentistry and general surgery. 8 cases had a fatal outcome due to inadequate indication of treatment or late adhibition; 3 of these were considered manslaughter. In 5 cases the medical error ended with the inability to procreate, wheres 5 cases were less critical. [19]

In Portugal, after analizing 1040 complaints against medical personnel, OB-GYN, was also ranked 4th as incidence, with a total number of 54 complaints from which 43 were declared medical malpractice, and so becoming no.1 in the malpractice rank. [20]

As for the practice domain – public vs. private, and the place of practice – hospital and clinic vs. policlinic, where most often mistakes in OB-GYN are met, a study that analized 84 cases of medical malpractice, presented to Poland's Supreme Medical Court between 2002 and 2012, noticed that doctors oncall at the highest risk, followed by those that practice in private offices, the least errors being made in the policlinic. The same study showed that most often errors were those involving diagnostic and treatment decisions regarding labour and act of birth.[21]. It was observed that the number of referrals recieved by specialists and

[18] S. Andreasen, B. Backe, P. Øian, *Claims for compensation after alleged birth asphyxia: a nationwide study covering 15 years.* Acta Obstet Gynecol Scand. 2014 Feb;93(2):152-8. doi: 10.1111/aogs.12276.
[19] J.P. Knaak, M. Parzeller, *Court decisions on medical malpractice*. Int J Legal Med. 2014 Nov;128(6):1049-57. doi: 10.1007/s00414-014-0976-2.
[20] F. Silva, E. Rodrigues M Rodrigues, J. Bernardes, *Disciplinary Actions in Gynecology and Obstetrics in the North of Portugal from Year 2008 to 2012*. Acta Med Port. 2015 Mar-Apr;28(2):194-203.
[21] P. Kordel, K. Kordel, *Professional misconduct in obstetrics and gynecology in light of the Supreme Medical Court between 2002-2012*. Ginekol Pol. 2014 Nov;85(11):860-6.

the malpractice inssurance value are interconected – under the insured sum of 250k $, the number of new patients decreases liniary. [22]

The malpractice consequences' impact on the medical practice, has reified in the emerge of the practice of defensive medicine, thus a study conducted on doctors that deal with breast care tried to determine the carrier satisfaction, showing a rise in defensive medicine practicants, with more referrals to paraclinically tests and doctors with higher competence – its frequency being directly proportional with the number of malpractice complaints. The average declared satisfaction was high, decreases being reported when two or more law suits were active. [23]

Also about the professional satisfaction in OB-GYN, a study from Michigan, related the professional satisfaction to the professional liability burden (civil, criminal or administrative) using as measure units the cost of the malpractice insurance and a doctor's number of complaints. 43% of those surveyed declared a decrease in the professional satisfaction in the last five years and 34% would not recommend to students, OB-GYN as future specialty. There was no correlation found between the satisfaction decrease and the number of complaints, but the rise above 50k $ in the insurance cost was correlated with the drop in satisfaction. [24]

In a retrospective study (unpublished data), from IML Cluj-Napoca, when analyzing medical malpractice cases from 1999 to 2015, preliminary results showed that from a total of 67 cases, 23 were in OB-GYN. 9 were surgical cases – 6 fatal, 2 caused infirmity and 1 permanent esthetic prejudice, whereas 14 were medical cases – only one was fatal. The main causes were identified as imprudence in the surgical procedures, negligence, lack of knowledge or clinical skill and the absence of the informed consent.

2. Case report

Patient CA, 32y old, she is admitted in 26 of May in the OB-GYN clinic of a municipal hospital with the following diagnostics: 33w pregnancy, antepartum dead fetus in cranial presentation, intact membranes, eutocic pelvis. Pregnancy arterial hypertension. Placental abruption. At 19:00hrs a team of surgeons start the fetal extraction. They discover a 1L haematoma in the uterus; palpatory the uterus

[22] X. Xu, S.J. Spurr, B. Nan, A.M. Fendrick, *The effect of medical malpractice liability on rate of referrals received by specialist physicians.* Health Econ Policy Law. 2013 Oct;8(4):453-75. doi: 10.1017/S1744133113000157. Epub 2013 Mar 26.

[23] B.L. Anderson, A.L. Strunk, J. Schulkin, *Study on defensive medicine practices among obstetricians and gynecologists who provide breast care*. J Healthc Qual. 2011 May-Jun;33(3):37-43. doi: 10.1111/j.1945-1474.2010.00120.x.

[24] X. Xu, K.A. Siefert, P.D. Jacobson, J.R. Lori, S.B. Ransom, *The impact of malpractice burden on Michigan obstetrician-gynecologists' career satisfaction*. Womens Health Issues. 2008 Jul-Aug;18(4):229-37. doi: 10.1016/j.whi.2008.02.007d.

was flaccid, even after the administration of oxytocin. The doctors decide to operate – a necessity subtotal hysterectomy with left anexectomy was performed. At 22:00hrs the aware patient was extubated. At 22:45 she becomes agitated, with pale skin, arterial tension drops and the pulse rises, bloody secretion on the drainage tube and spontaneous bleeding at the venipunctures. An emergency reoperation is performed which ascertained suture thread bleeding. They establish that haemostasis was performed correctly; the apply hemostatic gelaspon and an anatomical suture of the abdominal wall. The patient is transferred to a districtual hospital with the suspicion of disseminated intravascular coagulation. Because of an unfavorable evolution despite the blood transfusions, in 27 of May, 10:00hrs another surgery is performed and a haematoma of the abdominal wall is found, fused above and under the aponevrosis, the source of which was the hypogastric vascular bundle. They evacuate 3L of blood and clots and find the caecum's wall sutured on the abdominal wall. A correction is applied and because of the continuous bleeding additional hemostatis is made (the ligature of the hipogastric and lombar-ovarian bundles). Between 27 and 30 of may, the patient does not overcome the critical state, and another intervention is performed in 30, at 13:00hrs. The surgeons find 2L of blood inside the abdomen; for a complete and ferm hemostasis the right lombar-ovarian bundle is ligatured. After a continuous exploration they also find a ruptured spleen for which a splenectomy is performed. The patient state starts to slowly ameliorate. She was discharged in 28 of July, hemodynamic stable but with neurological sequelae.

From a forensic (medico-legal) point of view, the hipogastric bundle lesion and the spleen rupture (with 2L internal bleeding) were life threatening traumas. The splenectomy and the right anexectomy caused infirmities. The caecum suture was considered injury by negligence.

3. Discussion and conclusions

The changing social environment of the last two decades, had transformed the medical area of obstetrics and gynecology into a domain the assures the investigations and treatment of a wide palette of pathologies, with a high number of consultations; and because of the advance of medical research in understanding the etiology and pathogeny of diseases, and a rise in prevention possibilities – the number of reasons for seeking OB-GYN advice is on the rise, thus the number of consultations is constantly growing.

In OB-GYN, the medical act, for establishing a diagnostic and elaborating the therapeutically plan, implies an in-stages standardized underway (like in all the other medical specialties): the anamnesis – which in addition to its role as interview, is of paramount importance in establishing a trust-based relationship between the doctor and the patient; the physical exam – has the particularity of people's reluctance in exposing their genitallia, and also the invasive approach which can

create discomfort; the invasive paraclinical examinations and the running of any treatment (medical, surgical or interventional) – requires the informed consent of the patient and strictly compliance of the clinical guidelines of the doctor. The diagnostic and prognostic argued explain – it is overwhelmed by the emotional luggage of the patient and families.

In any of these stages of the medical act, any prejudice derived from the medical practice of the OB-GYN specialist may attract the call into account of the doctor with financial, social, and professional interferences between doctor-hospital and doctor-patient relationships. Considering the possibility to obtain financial compensation consecutive to wrong practices, in the law of torts an entire industry of malpractice went into development (especially in the USA) and as a consequence a new medical practice emerged: defensive medicine – where the doctor does not treat patients anymore (the treatment being adapted to each patient), but diseases, where the doctor follow protocols and guidelines, fearing the call to answer.[25]So the relationship doctor-patient alters from both sides – the patient sees the doctor as a potential source of money and the doctor sees the patient as possible plaintiff.[26] The medical errors in OB-GYN may influence the vital prognosis (possible death), the functional prognosis (infertility), and also may affect the mental health of the prejudiced families because of the strong emotional impact of the infertility news. Worldwide, the costs derived from OB-GYN malpractice – insurance and compensation – imply large amounts of money.

In conclusion we may declare that in comparison with other medical specialties, OB-GYN is one of the first in the malpractice risk ranking, as incidence, gravity and costs. The main phases in the medical act where most errors are made are those in elaborating and applying the treatment – temporal, qualitative and quantitive aspects – especially the surgical treatment involving the labor, birth and the first week postpartum. From the forensic point of view, the most often met medical malpractice is the medical guilt by commission – the error against the medical science.

[25] D. M. Studdert, M.M. Mello, W. M. Sage, C. M. DesRoches, J. Peugh, K. Zapert, & T.A. Brennan, (2005) *Defensive medicine among high-risk specialist physicians in a volatile malpractice environment.* JAMA, 293 (21), 2609–2617.

[26] D. Roter, *The Patient-Physician Relationship and its Implications for Malpractice Litigation*, 9 J. Health Care L. & Pol'y 304 (2006).

Bibliography:

1. Academia Română, Institultul de lingvistică Iorgu Iordan 2009 *Dicţionar explicativ al limbii romane*; Univers Enciclopedic.
2. Anderson, B.L., Strunk, A.L., Schulkin, J., 2011 *Study on defensive medicine practices among obstetricians and gynecologists who provide breast care*. J Healthc Qual. 2011 May-Jun;33(3):37-43. doi: 10.1111/j.1945-1474.2010.00120.x.
3. Garner, B.A., 1999 ed. *Black's Law Dictionary*, 7th St. Paul, MN: West Group.
4. Gómez-Durán, E.L., Mulà-Rosías, J.A., Lailla-Vicens J.M., Benet-Travé J., Arimany-Manso J., *Analysis of obstetrics and gynecology professional liability claims in Catalonia*, Spain (1986-2010). J Forensic Leg Med. 2013 Jul;20(5):442-6. doi: 10.1016/j.jflm.2012.12.006.
5. Iftenie, V., Dermengiu, D., 2014 *Medicină legală – curs universitar* Ed. 2, C.H. Beck.
6. Knaak, J.P., Parzeller, M., *Court decisions on medical malpractice*. 2014 Int J Legal Med. 2014 Nov;128(6):1049-57. doi: 10.1007/s00414-014-0976-2.
7. Marcu, F., 2008 *Marele dicţionar de neologisme (ediţia a X-a revăzută, augmentată şi actualizată)*; Saeculum.
8. Pearlman, M., 2006 *Patient Safety in Obstetrics and Gynecology An Agenda for the Future*, The American College of Obstetricians and Gynecologists 108: 1266-71.
9. Silva F., Rodrigues, E., Rodrigues, M., Bernardes, J., 2015 *Disciplinary Actions in Gynecology and Obstetrics in the North of Portugal from Year 2008 to 2012*. Acta Med Port. 2015 Mar-Apr;28(2):194-203.
10. Simion, R. M., 2010, *Malpraxisul medical: oportunitate sau realitate*, Humanitas.
11. Studdert, D. M., Mello, M. M., Sage, W. M., DesRoches, C. M., Peugh, J., Zapert, K., & Brennan, T. A., 2005 *Defensive medicine among high-risk specialist physicians in a volatile malpractice environment*. JAMA, 293 (21), 2609–2617.
12. Uesugi, N., Yamanaka, M., Suzuki, T., Hirahara, F., 2010 *Analysis of birth-related medical malpractice litigation cases in Japan: review and discussion towards implementation of a no-fault compensation system.* J Obstet Gynaecol Res. 2010 Aug;36(4):717-25. doi: 10.1111/j.1447-0756.2010.01240.x.
13. Wilson, N., Strunk, A.L., 2006 *Overview of the 2006 ACOG Survey on Professional Liability*, The American College of Obstetricians and Gynecologists.
14. Xu, X., Spurr, S.J., Nan, B., Fendrick, A.M., 2013 *The effect of medical malpractice liability on rate of referrals received by specialist physicians*, Health Econ Policy Law. 2013 Oct;8(4):453-75. doi: 10.1017/S1744133113000157. Epub 2013 Mar 26.
15. Zhou, M., Huang, Y., Deng, Z.H., 2009 *Analysis of 82 forensic expertise cases on medical disputes in obstetrics and gynecology,*. Fa Yi Xue Za Zhi. 2009 Jun; 25(3):192-4.
16. Andreasen, S., Backe, B., Øian, P., 2014 *Claims for compensation after alleged birth asphyxia: a nationwide study covering 15 years*. Acta Obstet Gynecol Scand. 2014 Feb;93(2):152-8. doi: 10.1111/aogs.12276.
17. Elkin, K.J., Spittal, M.J., Elkin, D.J., Studdert, D.M., *Doctors disciplined for professional misconduct in Australia and New Zealand*, 2000-2009. Med J Aust. 2011 May 2;194(9):452-6.
18. Henary, B.Y., Al-Yahia, O.A., Al-Gabbany, S.A., Al-Kharaz, S.M., 2012 *Epidemiology of medico-legal litigations and related medical errors in Central and Northern Saudi Arabia. A retrospective prevalence study*. Saudi Med J. 2012 Jul;33(7):768-75.
19. https://www.abog.org/new/default.aspx.
20. Kordel, P., Kordel, K. *2014 Professional misconduct in obstetrics and gynecology in light of the Supreme Medical Court between 2002-2012*. Ginekol Pol. 2014 Nov;85(11):860-6.

21. Nasui, G. A., 2010 *Malpraxisul medical-particularitățile răspunderii civile medicale*, Universul Juridic.
22. Roter, D., 2006 *The Patient-Physician Relationship and its Implications for Malpractice Litigation*, 9 J. Health Care L. & Pol'y 304.
23. Shojai, R., Bretelle, F., D'Ercole, C., Boubli, L., Piercecchi, M.D., *Litigation in obstetrics and gynaecology: experience of a university hospital in France*. J Gynecol Obstet Biol Reprod (Paris). 2013 Feb;42(1):71-5. doi: 10.1016/j.jgyn.2012.05.009. Epub 2012 Jun 27.
24. Studdert, D. M., Mello, M.M., Gawande, A.A., Gandhi, T.K., Kachalia, A., Yoon, C., Puopolo, A.L., Brennan, T.A. 2006 *Claims, Errors, and Compensation Payments in Medical Malpractice Litigation*, The New England Journal of Medicine 354: 2024-33.
25. Taragin, M. I., Wilczek, A.P., Karns, M.E., Trout, R., Carson, J.L. 1992 *Physician Demographics and the Risk of Medical Malpractice*, The American Journal of Medicine 93: 537-42.
26. Xu, X., Siefert, K.A., Jacobson, P.D., Lori, J.R., Ransom, S.B., 2008 *The impact of malpractice burden on Michigan obstetrician-gynecologists' career satisfaction*. Womens Health Issues. 2008 Jul-Aug;18(4):229-37.doi: 10.1016/j.whi.2008.02.007d.