

Original communication

Obstetric and gynecologic malpractice in Turkey: incidence, impact, causes and prevention

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Abstract

The Forensic Medicine Association was established in Turkey by law number 2659 for the purpose of providing expertise in legal cases. In this study the opinions given by the lawcourts and public defenders in the Forensic Medicine Association's First, Second, Third, and Fifth Specialization Divisions between the years 1990 and 2000 (approximately 680,000 files) were examined retrospectively. It was determined from these that there were 636 cases of medical malpractice. In examining the distribution of cases based on speciality branch, it was established that 16.82% ($n = 107$) were in the area of obstetrics and gynecology, 10.69% ($n = 68$) in general surgery, 10.53% in neurology and neurosurgery, and the remaining areas were found to be at lower percentages. It also showed that in recent years there has been an increase in the number of cases claiming medical malpractice in the area of obstetrics and gynecology, and that 58% of the cases ($n = 62$) from 1998 to 2000 were in this area. 96% of the 107 cases that claimed malpractice in the area of obstetrics and gynecology were found to be related to obstetrics and 3.8% ($n = 4$) to gynecology and surgical procedures. In 31% ($n = 33$) of the 107 cases fault was found; all of the cases where medical malpractice was found were in the area of obstetrics and none of the cases related to gynecology were found to have an element of error. Cases that had an element of error were evaluated from the aspect of profession of the health care personnel at fault, areas of fault, places where fault occurred, situations that resulted in death, cause of death, whether or not an autopsy was done, injury that resulted from fault, intervention that was done, and obstetric and gynecologic risk factors that set the stage for claims. Care standards and breach of standards were examined.

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1. Introduction

The occurrence of harm, injury or death to a patient during treatment brings about not only physicians' social responsibility but also their legal responsibility. It is not always easy to determine whether or not the injury occurred as a result of medical negligence.¹ In legal cases

where the solution requires special technical and scientific knowledge, information is obtained on the subject from qualified associations or institutions. Those who provide information on subjects that require technical and scientific knowledge for a solution that is faced in a legal case are called experts or expert institutions.² When cases comprising claims of medical malpractice are considered in court, there is a need for specialized knowledge to evaluate whether or not there has been a deviation from standard care, to evaluate whether or not a clinical error or negligence occurred, whether or not a standard of care exists and what the standard is, and to determine whether or not there is a clear relationship between cause and result with injury that arises from fault. These determinations are made by those who are

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specialized in related areas and by forensic investigators (forensic medicine experts).³

Professionals who work in the areas of the science of medical malpractice and related fields are in a position to see people who are injured while receiving care from faulty, a bad medical practice. At the World Medical Association's 44th General Conference in 1992 the World Medical Association defined "medical malpractice" as "injury that occurs when a physician does not give standard treatment in medical care, has a skill deficit or does not treat a patient". There are many causes of injury to patients. Injury that occurs as a result of unforeseen knowledge during medical treatment or skill deficit is an "unexpected result" and the physician is not responsible for this.⁴

The Forensic Medicine Association in Turkey was established by law number 2659 for the purpose of providing expertise in legal cases. Scientific and technical opinions are requested on subjects related to forensic medicine that are sent from courts, judges and public defenders. In the internal structure of the Forensic Medicine Association there are 5 specialty associations and divisions with experts assigned to different medical fields that have the duty to provide expertise according to the contents of legal files. From these the First and Second Specialty Divisions are responsible for forensic questions in the area of obstetrics and gynecology. The First Specialty Division is responsible for examining cases which resulted in death; the Second Specialty Division is responsible for examining cases that do not result in death in the area of obstetrics and gynecology and for sexual assault cases.⁵

2. Materials and methods

In our study we examined approximately 680,000 files retrospectively for the opinions that were given by the lawcourts and public defenders and the Forensic Medicine Association Specialization Divisions for the 11 years between 1990 and 2000. In those which were found to include a claim of medical malpractice the distribution according to the areas of specialty involved in the cases was determined. The cases that had a claim of malpractice in the area of obstetrics and gynecology were evaluated by distribution according to year, distribution according to whether the area of event was in obstetrics or gynecology, the number of accused people, the profession of the accused health professional, the area of fault, and the place where the fault occurred. In outcome, cause of death, whether autopsy was done or not, clear injury resulting from fault, intervention that was done, distribution of rate of fault, and obstetric and gynecologic risk factors that set the stage for claims were investigated. The cases were evaluated on care standards and breach of care standards.

3. Findings and discussion

The opinions given by the lawcourts and public defenders in the Forensic Medicine Association's First, Second, Third, and Fifth Specialization Divisions for the 11 years between 1990 and 2000 and approximately 680,000 files were examined retrospectively. It was determined from these that there were 636 cases of medical malpractice. The examination of the distribution of area of speciality of the cases showed that 16.82% ($n = 107$) were in obstetrics and gynecology, 10.69% ($n = 68$) were in general surgery, 10.53% ($n = 67$) were in neurology and neurosurgery, and the remaining specialities were in lower percentages (Table 1). In the literature obstetrics, gynecology, anesthesia and orthopedics are identified as high risk areas.⁶ In our study anesthesia was fourth in frequency at 9.43% and orthopedics was 6th with 6.60%.

Court cases that are opened against obstetricians and gynecologists are showing an increase throughout the world.⁷ In 1985 the St. Paul Company, one of the largest medical malpractice insurance companies in the USA, reported that 44% of their medical malpractice cases were against obstetricians and gynecologists and that this type of claim had shown a 59% increase since the year 1981.⁸ In a study on professional responsibility by The American College of Obstetricians and Gynecologists (ACOG) 78% of obstetricians and gynecologists reported that they had had a medical malpractice case opened against them at least once and 37% had had 3 or

Table 1
Distribution of claims of malpractice sent to the Forensic Medicine Association according to area of speciality

Area of speciality	Number of cases	%
Obstetrics and gynecology	107	16.82
General surgery	68	10.69
Neurology and neurosurgery	67	10.53
Anesthesia	60	9.43
Internal medicine	57	8.96
Orthopedics	42	6.60
General practitioner	31	4.87
Emergency	15	2.35
Ophthalmology	28	4.40
Otolaryngology	28	4.40
Pediatrics	24	3.77
Dentistry	15	2.35
Thoracic surgery	15	2.35
Cardiovascular surgery	15	2.35
Urology	14	2.20
Plastic surgery	6	0.94
Psychiatry	5	0.78
Laboratory	5	0.78
Radiology	4	0.62
Intensive care	4	0.62
Occupational health	1	0.15
Dermatology	1	0.15
Hospital held responsible	1	0.15
Reaction to medication	23	3.61
Total	636	100.00

more cases opened against them.^{9–11} In a study done in Washington state in the USA between January 1982 and June 1988, 387 family practitioners and 204 obstetricians and gynecologists had had a medical malpractice case opened against them and 53 of these physicians were charged because of an obstetrical medical malpractice.¹² In a study that was done in England it was reported that 29% of the physicians blamed for medical malpractice were obstetricians and gynecologists, of these two thirds were young physicians and one third were consultant physicians.¹³ In addition it is a fact that midwives and nurses also carry a large risk because of their special responsibility for the care of mothers and infants.¹⁴

In obstetrics there are both the lives of the mother and the fetus at stake. For that reason because of complications with both the mother and the fetus the possibility of complications is higher than with other specialities.¹⁵

There has been a noticeable increase in the number of obstetrics and gynecology medical malpractice cases sent to the Forensic Medicine Association's First and Second Specialty Divisions in recent years. In our study 58% ($n = 62$) of the cases during the years 1998–2000 were in obstetrics and gynecology (Table 2). Developments in medical care standards have increased the patients' expectations from their physicians and the medical profession.¹³ Besides this the increase in the level of public education and an increase in the sensitivity of communication tools have opened the way for an increasing number of medical malpractice claims. Developments in the care of newborns have also led to an increase in the chance for injured infants to survive and with that an increase in the number of claims.¹⁵ In our study 3.8% ($n = 4$) of the cases are in gynecology, 96.2% ($n = 103$) of the cases are in obstetrics (Table 3).

In related literature the age and socioeconomic level of patients who open cases against physicians has been researched. It has been reported that, compared to

Table 3
Distribution of cases according to obstetrics and gynecology

	<i>n</i>	%
Obstetrics	103	96.2
Gynecology	4	3.8
Total	107	100

others, there are clearly fewer claims made by patients of low socioeconomic groups, those less than 16 and more than 65 years old.¹⁶ In the medical malpractice cases in files of women's diseases and births that were sent to The Forensic Medicine Association there is a noticeable concentration in the 21–40 year olds but very few in the younger and older age groups. The reason for this must be the reproductive age of women since the overwhelming majority of these cases are related to obstetrics. The age of patients in this study was between 16 and 46 and the mean age was 29. In a 64 case series of obstetric medical malpractice cases the ages ranged from 17 to 39 with the mean age of 27.¹⁷

In the obstetric and gynecologic malpractice cases 70% ($n = 88$) blamed the obstetrician and gynecologist (one of those blamed was in specialty training, the others had completed their specialty training), 23% ($n = 28$) blamed the midwife and nurse, 3.0% ($n = 4$) blamed

Physicians in other specialties, 3.0% ($n = 4$) blamed a member of the surgical or health team, 1.5% ($n = 2$) blamed a general practitioner (Table 4). In a study done in Washington state in the USA between January 1982 and June 1988, 387 family practitioners and 204 obstetricians and gynecologists had had a medical malpractice case opened against them and 53 of these physicians were charged because of an obstetrical medical malpractice.¹² In another study it was reported that in rural and border regions in the USA where general practitioners provide obstetric care 11.8% of them had medical malpractice cases related to obstetrics opened against them. In a study done in England it was reported that 29% of physicians accused of medical malpractice were obstetricians and gynecologists.¹³

In addition it is a fact that midwives and nurses also carry a large risk because of their special responsibility for the care of mothers and infants.¹⁴ In a study done in England it was reported that the majority of those

Table 2
Distribution of obstetric and gynecologic medical malpractice claims according to year of claim

Year	<i>n</i>	%
1990	3	2.8
1991	2	1.8
1992	11	10.3
1993	6	5.5
1994	7	6.5
1995	7	6.5
1996	6	5.6
1997	4	3.5
1998	22	20.5
1999	20	18.5
2000	20	18.5
Total	107	100

Table 4
Distribution according to the profession of the individual identified in the malpractice claim

Profession	<i>n</i>	%
Obstetrics–gynecology specialist	88	70
Midwife and nurse	28	22.5
Team	4	3.0
Other speciality branches	4	3.0
General practitioner	2	1.5
Total	126	100

blamed for complications that occurred during delivery were midwives and young physicians.¹³ In a study done in the USA it was reported that 36% of physicians in obstetrics and gynecology specialty training had had cases opened against them.¹⁸ Only one of the accused physicians in our research was an assistant. In our research the number of unfounded claims was 69% ($n = 64$). On this subject Lynch et al.⁶ found a value of 46% ($n = 33$). Both our study and Lynch's show that a large proportion of the medical malpractice claims are unfounded. In our study in the cases which had an element of guilt 39% ($n = 13$) were from failure to make a diagnosis, 30% ($n = 10$) were with an obstetric intervention, 15.15% were from failure to show patient necessary interest, 12.12% ($n = 4$) were from inadequate follow-up, 3.03% ($n = 1$) were related to surgical procedures (Tables 6 and 10). In a study in England it was reported that 19% of obstetric and gynecologic claims were from wrong clinical practice, bad team work, inadequate care for example the physicians going beyond the limits of their authority and that 12% of those with bad results were from making wrong decisions and 7% were related to patient consent.⁶

When there is clear negligence or error in Medical Malpractice one of the important components is knowing and evaluating the environment. According to the Turkish Medical Association Turkish Health Statistics for the year 2000 catalogue in 1998 it was reported that there were 727 government hospitals, 212 private hospitals, 115 Social Insurance Institute hospitals, 40 university hospitals, and 42 military hospitals in Turkey.¹⁹ In our study the events that led to claims of malpractice occurred 40% ($n = 43$) in government hospitals, 18.6% ($n = 20$) in private hospitals, 14.9% ($n = 16$) in Social Insurance Institute hospitals, 7.4% ($n = 8$) in university hospitals, 5.6% ($n = 6$) in doctor's offices, 4.6% ($n = 5$) in patients' homes, 2.8% ($n = 3$) in private clinics, 1.8% ($n = 3$) in public health clinics, 2.8% ($n = 2$) in rural health clinics and 0.9% ($n = 1$) in military hospitals (Table 5). It is thought that the higher percentage at government hospitals is because of the larger number of patients admitted to these hospitals in addition to the fact that there are more government hospitals than the other health facilities and that they are available in more areas of the country. However when the total number of patients percentage of private hospitals and doctors offices is examined it remains proportionally high. This situation may be related to the fact that patients who pay a higher price in doctors' offices and hospitals and expect better patient care also complain more. In addition every type of medical intervention not being done in doctors' offices, not going outside the doctors' offices for procedures that are possible to be done in the conditions of doctors' offices, and the necessity arises of obeying rules related to doctors' offices.

Table 5
Distribution according to place of occurrence in malpractice cases

Place	<i>n</i>	%
Government hospitals	43	40.1
Private hospitals	20	18.6
Insurance hospitals	16	14.9
University hospitals	8	7.4
Doctors' offices	6	5.6
Homes	5	4.6
Private clinics	3	2.8
Rural health clinic	3	2.8
Public health clinic	2	1.8
Military hospitals	1	0.9
Total	107	100

Table 6
Areas involved in errors in malpractice cases

	<i>n</i>	%
Diagnosis	13	39.39
Negligence	5	15.15
Obstetric intervention	10	30.30
Surgical intervention	1	3.03
Follow-up	4	12.12
Total	33	100

Among the 107 medical malpractice cases that were found the result of fault of the 22 cases there were identified 18.18% ($n = 4$) was maternal death, 59% ($n = 13$) was death of the infant, and 23% ($n = 5$) was death of both mother and infant (Table 7).

The primary reason for maternal death was hemorrhage. The primary causes of hemorrhage were uterine rupture, uterine atony and retained placental fragments (Table 8(a)). In a study by the Forensic Medicine Association that included the years 1984–1994, it was reported that the direct cause of death for 80% of maternal deaths was hemorrhage and of these 31% were due to uterine rupture and 11.42% were due to uterine atony.²⁰ In the cases that we examined it was shown that the cases of uterine rupture, in particular cephalopelvic disproportion, were due to the delivery not being monitored adequately, presentation anomaly and pressure on the abdomen to the uterus (Kristeller maneuver) (Table 10). This type of maternal death is avoidable. For that reason it is difficult to defend a case with this type of fault in court. It is necessary to follow standards of care for delivery for a

Table 7
Distribution of cases that resulted in death due to error

	<i>n</i>	%
Mother	4	18.18
Baby	13	59.09
Mother and baby	5	22.7
Total	22	100

Table 8

	<i>n</i>
<i>(a) Causes of maternal deaths</i>	
Eclampsia	1
Hemorrhage due to uterine atony	1
Hemorrhage due to uterine rupture	4
Peritonitis from colon rupture during laporoscopic procedures	1
Hemorrhage due to placental attachment disorders	1
Hemorrhage due to retained placental fragments	1
Total	9
<i>(b) Causes of infant death</i>	
I.U. Asphyxia resulting from cord compression, knotting	2
I.U. Asphyxia resulting from uterine rupture	8
Aspiration of amniotic fluid	1
Congenital anomaly not diagnosed by US	1
I.U. fetal death resulting from eclamptic maternal death	1
Newborn pneumonia related to meconium aspiration in postterm infants	1
Trauma during delivery	1
Placental separation	2
Intrauterine asphyxia resulting from prolonged delivery because of large infant	1
Total	18

delivery with ruptured uterus not to be the responsibility of the physician.²⁰

Uterine atony is one of the situations that is a problem for both the obstetrician and the midwife. Negligence for not diagnosing and treating postpartum hemorrhage due to atony, not carrying out known methods while treating for shock, in this situation giving blood inappropriately to the patient and not sufficiently monitoring a hemorrhaging patient is the responsibility of the obstetrician.²¹

Late postpartum hemorrhage in our day is increasingly showing a trend to be a source of concern. Late postpartum hemorrhage is a problem in particular in situations where patients are not kept in the hospital for 48 hours after delivery and discharged early. A frequent cause of late postpartum bleeding is placental fragments retained in the uterus after delivery or abnormal repair of the placental site.²¹ Medical records from medical malpractice claims show that blood loss is very frequently underestimated. In records that have been examined although blood loss of 250–300 ml is recorded, blood index shows that the patient who has delivered has lost half of her total blood volume. If routine postpartum observation is done wrong estimations to this extent will not occur. The occurrence of this problem clearly shows the lack of attention shown in the postpartum period. In situations where bleeding is of an amount that is important and can be recognized clinically, loss of the

uterus which resulted from late intervention and in the development of Shelan syndrome from hypovolemia the amount of damages awarded by the courts can be very high.²¹

Eclampsia, intrauterine fetal death and sepsis were the cause of one of the maternal deaths that we examined (Tables 8(a) and 10). Approximately half of the injuries to the fetus in the medical malpractice cases were a result of hypertension in the mother. The finding of this complication in pregnancy leads to an approximately ten-fold increase in risk for medical malpractice claim. If standard obstetric procedure is not followed and tests for preeclampsia diagnosis are not done, if standard treatment is not done and in this way as a result of treatment the patient is injured the physician can be held responsible.²² Extra care should be taken to look for early signs and symptoms of preeclampsia and eclampsia for the purpose of being able to prevent the negative effects of hypertension. The claimant patient who can prove the physician's negligence makes the physician's defense invalid.²² A case can be opened about a physician who is found negligent in the treatment of preeclampsia and eclampsia. This type of case creates a situation of breach of accepted standards of care in hospitals with inadequate intensive care units and neonatal care facilities.²³ The case of eclampsia that resulted in intrauterine fetal and maternal death in our research occurred in a private hospital. However no information was found about whether this private hospital had an intensive care unit and neonatal care facility.

Within the cases that were examined there were 18 cases of infant death that contained a component of error. In these cases the causes of death included uterine rupture, cord compression, placental separation, amniotic fluid aspiration, birth trauma and meconium aspiration (Tables 8(b) and 10).

In the literature among problems related to indefensible obstetric claims, other than problems related to the cord and placenta, stillbirths, meconium aspiration, fetal distress, difficult delivery, breech presentation, are problems of abnormal presentation, cephalopelvic disproportion, infant trauma, and vaginal delivery after previous cesarean delivery. The causes of death in the infant cases in our study have the characteristic of being indefensible. These type of claims are characterized by having indefensible causes such as failure to auscultate or to electronically monitor fetal heart tones in required manner, evaluating fetal heart tracing incorrectly or not at all, not noticing a difficult delivery or not accepting it in a necessary manner, not using oxytocin in a manner according to practice criteria, not performing cesarean operation or performing late, failure to adequately resuscitate newborn, and midwives failure to notify physician of problems that occur during delivery or about a high risk situation.

Among the situations where there is a breach of accepted standards of care in cases where the umbilical cord is prolapsed include not performing cesarean operation in time, not turning the patient with a prolapsed cord who is about to deliver onto her side, not giving oxygen to a woman who is about to deliver, not elevating the foot of the bed to decrease pressure on the cord, not elevating the presenting part manually and in this way not protecting the umbilical cord from pressure until delivery, performing unnecessary cesarean procedure when there are no findings consistent with a living fetus.^{21,24}

When the cases that resulted in death and had a component of fault were examined for presence of autopsy, only 44% ($n = 4$) of the 9 maternal death cases and 22% ($n = 4$) of the 18 infant death cases had autopsies performed and a confirmed cause of death determined. Then the percentage of maternal deaths without autopsies was 56% and infant deaths was 78% (Table 9(a)–(c)).

Autopsy is a method not to be waived in determining the accurate cause of death and is extremely important for administering justice in the right manner. It is valuable in determining and proving cases of medical malpractice. The findings obtained at autopsy also are beneficial in the determination of whether or not a patient's treatment was given according to conditions of standard care. It is possible to determine with autopsy whether death resulted from an error in treatment or from an illness present in the patient previously.²⁵ In particular physicians who perform autopsies on maternal deaths seek the opinions of obstetricians and assist in shedding light on problems related to the subject. Moreover the examination of maternal deaths is important in the evaluation of the quality of obstetric care.

In some maternal deaths it is difficult to determine the cause of death clinically. Examples of these types of cases are amniotic fluid embolism and air embolism. These can be diagnosed only with a carefully done autopsy.

It is also possible to determine the true cause of death in infants with autopsy. In addition the designation of the gestational age can also be made with autopsy. The bone growth centers and organs such as kidneys, lungs and brains are examined at autopsy to determine maturation. In addition whether or not the infant was alive prior to delivery can be determined. Examination of the placenta is a necessary point both clinically and in forensics. In many circumstances in obstetric cases with fetal hypoxic damage the basic information related to etiopathogenesis can only be determined with a detailed examination of the placenta. To be able to define the precise cause of perinatal death it is essential to have a carefully performed autopsy together with an examination of the placenta. If the placenta is not sent to a laboratory for examination necessary information is lost and in many situations the cause of injury that occurs in newborns and fetuses remains a mystery. In these situations the precise mechanism of the event cannot be determined and underlying pathologic events are missed. The responsibility for infant disabilities or death is often misinterpreted in this way. In situations of sudden fetal death and intrapartum hemorrhage observing the space on the maternal surface of the placenta that is formed as a result of important separation, is the foundation for developing a result from a pathogenetic viewpoint. In some cases an examination of the placenta can give an idea about substandard care.^{22,26–29}

From the standpoint of legal responsibility the issue in the situation of finding fault in the behaviors of physicians, is whether they fulfilled the obligation to give necessary care and faithfulness that is expected of them incompletely or not at all. In the 107 cases that included claims of medical malpractice, there were 29 physicians and 10 midwives and nurses who were found to be at fault. When decisions are made on the subject of blame it is necessary to consider the health personnel's relationship with the treatments together with the various conditions. When the Forensic Medicine Association makes decisions on this subject the following are considered: whether or not the physician knows basic medical principles, the conditions of the physicians professional practice, an estimate of the physician's knowledge and skill in his own field not compared to the most qualified but the necessary knowledge and skill of an average physician, whether or not preventive measures were taken in cases where complications can occur, and whether or not necessary treatment was given when complications occurred.

In the cases we examined midwives were found at fault for reasons such as not notifying a physician about

Table 9

	<i>n</i>	%
<i>(a) Autopsy included in cases of maternal death resulting from a fault</i>		
Cases that had autopsy done	4	44.4
Cases without autopsies	5	55.6
Total maternal deaths	9	100
<i>(b) Autopsy included in cases of infant death resulting from a fault</i>		
Cases that had autopsy done	4	22.23
Cases without autopsies	14	77.77
Total infant deaths	18	100
<i>(c) Number of mothers and infants that had autopsies in the 107 malpractice cases of maternal and infant death</i>		
Autopsy not done on infant	23	38.9
Autopsy done on infant	16	27.1
Autopsy done on mother	12	20.3
Autopsy not done on mother	8	13.5
Total	59	100

Table 10
Injuries that occurred as a result of malpractice in 33 obstetric cases with fault

Type of fault	Number of cases	Injury that occurred
<i>Pregnancy and prenatal diagnosis</i>		
• As a result of obtaining insufficient history and testing, performing laparoscopy for infertility on a pregnant woman with general anesthesia	1	Abortion for medical reasons requested ending a pregnancy because of the anesthetic agents given to the patient, the use of X rays and antibiotics
• Preeclampsia/eclampsia diagnosis not made	1	Maternal and infant death
• Failure to diagnose congenital anomaly as a result of not observing a high AFP level	1	Birth of a congenital malformed baby
• Failure to recognize congenital anomalies on ultrasound	4	Birth of 4 congenital malformed babies, one of which later died
• Failure to diagnose large infant	1	Prolonged delivery and infant death as a result of intra-uterine asphyxia
<i>Birth</i>		
• Usage of oxytocin in cephalopelvic disproportion	2	In both cases infant and maternal death
• Usage of oxytocin in a transverse lie presentation left for vaginal delivery	1	Infant death
• Late intervention in placental attachment abnormalities	3	Maternal death in one case, in the other 2 cases infant death and maternal hysterectomy
• Poor observation of progress of delivery	2	In one case, infant death, in the other case maternal hysterectomy
• Excessive external pressure on the uterus	2	In both cases uterine rupture and infant death, in one case, maternal death
• Failure to notice tear in cuff of uterus and retention of placental fragments	1	Maternal death
<i>Cesarean</i>		
• Failure to determine indication for cesarean delivery	4	3 infant deaths, Erb paralysis and ischemic encephalopathy in 1 infant
• Allowing vaginal delivery in a patient with a previous cesarean delivery	1	Uterine rupture, hysterectomy, development of vesico-vaginal fistula, infant death
• Failure to adequately follow-up a patient after cesarean delivery	1	Development of severe uterine infection and hysterectomy
<i>Termination of pregnancy</i>		
• Carelessness during dilation and curettage	1	Uterine rupture and hysterectomy
<i>Ectopic pregnancy</i>		
• Carelessness during laporoscopic intervention for ectopic pregnancy	1	Perforation of colon and maternal death
<i>Miscarriage</i>		
• Failure to diagnose threatened abortion	1	Miscarriage
<i>Carelessness</i>		
• Failure to notify specialist in prolonged delivery	2	In one case, as a result of intrauterine asphyxia, delivery of infant with spastic quadraplegia. In the other case failure to recognize uterine rupture resulted in maternal and infant death.
• Leaving a patient without notifying another physician about the patient	1	Infant death as a result of uterine rupture
• Assistant physician intervening without notifying specialist (internal rotation)	1	Humerus fracture, subdural hematoma, infant death
• Physician's failure to come to hospital in spite of notification	1	Uterine atony that developed resulting in maternal death

a case, delivering a risky birth at home, not monitoring progress of delivery carefully, leaving the patient during birth. Midwives must be able to distinguish between normal birth findings and pathologic ones, should not lose time in assisting the patient with a normal vaginal delivery, but should transfer the patient to an obstetrics service. In particular in villages midwives who work at a distance from the assistance of obstetricians carry the

heavy responsibility of following a delivery carefully, thoroughly evaluating symptoms, seeing signs of danger early and taking necessary precautions without wasting time. It is necessary for midwives to not go beyond their area of authority or competency.

Of the 33 cases that had a component of fault 18.18% ($n = 6$) were determined to be related to cesarean procedures. Four of these cases were involved with not

identifying an indication for cesarean. This type of situation led to 3 cases of infant death, and in one case an infant with brachial plexus paralysis and ischemic encephalopathy. In one case the issue was a lack of sufficient follow-up of a patient following a cesarean procedure which led to a severe infection in the uterus and the necessity of hysterectomy (Table 10).

It is not surprising that with obstetricians frequently facing criticism about working to deliver a baby naturally by the vaginal route, the majority of claims relate to the performing of cesarean procedures. The physician can be held responsible for the following: negligence in performing a cesarean, not informing a patient that a cesarean procedure will be done, not sufficiently caring for a patient, neglect that results in injury to the infant, intervening too early, not performing a successful sterilization procedure following a cesarean, performing the cesarean late, operating against the patient's will, trauma during the operation (in particular injury to the bladder), and postoperative complications. The opinion from a forensic viewpoint in our cases related to cesarean procedures with a component of fault are listed below.

3.1. Maternal and infant death related to cesarean procedure done without indication

The majority of medical malpractice cases related to the birth of an infant are based on the claim that negligence resulted from the operation not being performed. Generally claims are made because of the death of the infant or because of serious trauma and permanent damage done during birth. Here claims are made when there is a clear indication for cesarean procedure the infant is delivered vaginally and because of this the infant dies or suffers serious injury.^{23,30–32} It is interesting to note that in three cases in our research that resulted in infant death, in spite of fetal distress the indication for cesarean was not made.

3.2. Injury to infant because of failure to determine indication for cesarean procedure

In one of our cases the issue is a situation where the diagnosis of fetal macrosomia was not made and the delivery was left to proceed normally. However a fetus weighing more than 4000 g is said to have macrosomia. When a decision is made by ultrasound or physical examination that the weight of the fetus is near 4000 g, a vaginal delivery that is done instead of cesarean can be said to be a breach of accepted standards of care. In dystocia cases winning the claim is based on convincing the court that it was estimated that an oversized baby was going to be born. In these types of cases a second problem was shoulder dystocia not being recognized by the physician or the practice of pressure on the fundus.

In these types of cases it is necessary to use suprapubic pressure or other maneuvers instead of pressure on the fundus. Otherwise in a case of a stuck shoulder the use of pressure on the fundus and head extraction from below can result in brachial plexus paralysis and brain damage. The permanent neurologic damage in the extremity that is a result of shoulder dystocia can be the cause of important physical, psychological and economic injuries. For this reason evaluating the amount of the compensation that will be requested in these types of cases requires consulting with an economist and a rehabilitation expert to plan assistance for the child for life.^{23,30–32}

3.3. Failure to adequately monitor the patient after cesarean procedure

In our case the patient developed a severe uterine infection after cesarean procedure which resulted in her loss of her uterus. Infection can occur after a cesarean procedure, in particular if there is bladder trauma, the environment is appropriate for the infection to develop because of the atony that occurs after birth. This can also cause a urinary tract infection. The physician must monitor the patient closely to be able to recognize this type of problem early and to give necessary treatment (Table 10).

In one of our cases a maternal death was due to failure to diagnose preeclampsia/eclampsia; in the case an internal medicine specialist did not diagnose preeclampsia and eclampsia and was found to be at fault because of failure to request consultation by an obstetrician. In one of our cases as well the physician was found to be responsible for failure to do necessary tests to determine preeclampsia and eclampsia and therefore to not give the patient appropriate treatment. Hypertension in pregnancy is one of the important causes that frequently leads to maternal death. In a study done by the Forensic Medicine Association it was determined that among direct causes of maternal death eclampsia is at a percentage of 5.7%.²⁰ In a study done at Haseki Hospital Obstetrics and Gynecology Service, Hacettepe University Maternity Service, Istanbul Maternity Insurance Hospital and Istanbul University Medical Faculty eclampsia was reported to be one of the primary causes of maternal death.^{20,33} Even though there has been a decrease in maternal deaths from this reason in recent years, mothers with preeclampsia/eclampsia are still facing death. Increasing resources for antenatal care, achieving better standards of living, and an improvement in general health may be causing the decrease in this type of case. One of the most important purposes of antenatal care for a long time has been the early diagnosis of preeclamptic hypertension and proteinuria and with treatment the prevention of the development of eclampsia. In evaluating factors 3/4ths of cases of

eclampsia and hypertension are factors that could have been prevented. It has been reported that there is a group of patients who, in spite of the possibility of death, at the suggestion to be hospitalized refuse antenatal care or are not cooperative. Some physicians are found at fault for being late in confirming symptoms of severe hypertension or for starting effective treatment late. These women must be followed closely by an obstetrician. A hypertensive disorder may have been present before pregnancy or may arise during pregnancy. Preeclampsia and eclampsia can be complications of essential hypertension. In both conditions in the majority of cases pathologic findings are present in the uterine vascular walls. This finding is investigated in all maternal deaths. Hypertensive disease can cause widespread lesions in many organs.³⁴

In one of the obstetric cases we examined an assistant physician, without notifying the specialist, performed an internal rotation procedure which resulted in a humerus fracture, subdural hematoma and infant death. During the delivery process the procedure must be carefully monitored. Inexperienced physicians should request assistance from a more experienced consultant when there is any doubt about a situation. Inexperienced physicians should not do risky procedures such as internal rotation. When experienced physicians are called discussions and notes should be clearly documented.

Among our cases there was a case in which the patient had previously undergone a cesarean procedure and the result of being left to deliver by the vaginal route was uterine rupture, vesico-vaginal fistula and loss of the uterus. "Once a cesarean is done always a cesarean will be done" concept has been the practice for obstetricians for many years. In spite of the general opinion that a previously performed cesarean procedure being an indication for cesarean delivery, the maternal morbidity after a repeat cesarean procedure is 10 times higher than the morbidity after vaginal delivery. On the other hand the risk of vaginal delivery after cesarean procedure is rupture of the uterine scar tissue.³⁵ In this situation a complication with the fetus occurs. The following points may help to guide when choosing between repeat cesarean and vaginal delivery: if the indication that led to the previous cesarean still exists (narrow pelvis contributing to cephalopelvic disproportion, for example) then the patient should be delivered by cesarean. If the previous cesarean procedure was of the classic type, it has a higher risk than one with a low segment incision. If the patient was previously delivered by cesarean procedure and hypersensitivity, bleeding or fetal distress occur, the delivery team must be prepared to perform an emergency cesarean procedure. If a vaginal delivery is being considered after a previous cesarean, an delivery team that has been trained for cesarean procedures and all necessary equipment must be available.

In repeat cesarean cases trial labor can be done within the following parameters: The patient must have had only one previous cesarean procedure. The indication for the previous cesarean procedure must no longer exist. The scar tissue must be low segment incision type. Blood typing and crossmatching must have been done. There must not be abnormal presentation or cephalopelvic disproportion. The patient must be carefully monitored during labor including fetal heart monitoring. The first signs that are often exhibited when rupture is about to occur are fetal distress, sudden end to contractions and increased sensitivity at the scar tissue site. It can also be established with sudden tachycardia. The resources for emergency laparotomy must be available. An anesthesiologist and pediatrician must be available. The weight of the fetus must be below 4000 g.³⁴ The obstetrician must have in hand definitive evidence that the fetus has reached maturity before performing repeat cesarean procedure. In addition after the delivery of the fetus it is the duty of the obstetrician to examine the inside of the uterus for the purpose of eliminating the possibility of uterine rupture and to be adequately prepared to treat if rupture has occurred.

Four of the obstetric cases that were examined were related to failure to diagnose congenital anomalies at ultrasound (Table 10). Diagnostic ultrasonography has gained importance in current obstetric practice. Physicians and the public believe in the benefit of ultrasonographic examination. However these kinds of expectations also open the way for increasing numbers of medical malpractice claims. The unexpected delivery of an abnormal fetus is devastating to parents. Because a growing number of anomalies can be determined prenatally the question of how a malformation in the fetus could have been missed during ultrasonographic examination can be asked. In a study it was reported that 25 medical malpractice cases were related to failure to diagnose fetal anomaly during obstetric ultrasound.³⁶ In the cases that have a claim there are a variety and number worthy of attention of important morphologic malformations that could not be determined during ultrasonography of the fetus. In spite of the difficulty in determining neural tube defects, heart and palate malformations, in general, conditions such as hydrocephalus, abdominal wall defects and renal agenesis can be seen in a properly done ultrasonographic examination.³⁷

These subjects that are within the scope of claims that can be made related to ultrasonography carry a special importance. The birth of a handicapped child as a result of a physician's negligent behavior and wrong action can be the reason for parents to make a claim against a physician. In some cases the incident is an unsuccessful sterilization procedure. If the newborn child is healthy the pregnancy related to wrong action is the issue, however the pregnancy related to wrong action term can only be used for handicapped children. Claims related to

the psychological distress suffered for the lifetime of a child born as a result of wrong action are opened with the reason shown as, if the physician had not acted negligently, the child would never have been born. In the American states of California, Washington and New Jersey these types of claims have begun to be accepted for this reason.^{38–40} In this type of case when a decision is made against a physician, the damages that are awarded can be very high because of the high cost of caring for a handicapped child. The arguments that focus on the rights of the fetus and child carry a lot of importance for the physicians who perform ultrasonography. Because the full extent of the law on this subject has not been determined in our day, an incident brings even more confusion with it. In general in cases related to the birth of a handicapped child as a result of wrong action legal procedures related to the wrongful action are implemented. In this type of claim the most important point is related to the scope of responsibility. In parallel with technologic developments in medicine there are now research methods to determine after conception whether or not a handicapped child will be born. At this point this question arises: Is the physician's responsibility to determine a defect after conception the same as the requirement of parents at risk to deliver a child with a defect.^{39,40}

By means of advances that are available in techniques with biomedical imaging today it is possible to determine intrauterine defects. However, the expectations of patients and, in general, the public are also increasing. As a result of discussions on this subject there is a positive approach for the wide scope and routine use of ultrasonography and magnetic resonance imaging techniques. However these developments and at the same time the belief that there is no way to make an error with the superior technologic resources and because of that the increasing expectations have also increased the physician's responsibility in the same manner. The question arises whether or not parents have the right to prevent the birth of a handicapped child by using technologic developments today, such as doppler ultrasound, computerized tomography, magnetic resonance imaging, and similar methods. On this subject some courts have given decisions that parents have the right to avoid the birth of a handicapped child using these types of medical devices and that the physician is also held responsible. Physicians' responsibilities include giving information to parents that will effect their decision of whether or not to terminate the pregnancy.

The basic question in claims that are made regarding the birth of a handicapped child because of wrong action is the evaluation of the trauma that is created for the parents. Some opinions are defending the equivalence of the concept, "psychological suffering for the lifespan of the child that is born handicapped because of wrong action" with the concept, "the birth of a child

born handicapped as a result of wrong action". Nevertheless in the USA the majority of claims of psychological suffering from the birth of a handicapped child because of wrong action have a negative result. The reason for this is that the claims are traditionally within the legal scope of wrong actions and the courts are forced to accept the rights of the fetus and the physician's responsibility to the fetus.^{41,42}

Within the scope of legal prosecution the physician's responsibility could potentially be extended to the period before conception. Within the scope of psychological suffering for the lifetime of a child who is born handicapped as a result of wrong action, there is a dilemma for the physician who does the ultrasound. The dilemma is whether or not the child will be born in the situation of notifying the parents about the presence of intrauterine defect seen on ultrasound. When the result of ultrasonic examination is in doubt this problem carries an even greater importance, because the question will be asked whether or not the examination was done in an inescapable manner and technically according to standards. Another difficult issue that is reflected in claims like these is whether the handicapped child's life is preferable over never being born. Some courts on this subject are raising the issue that a request for damages for the birth of a handicapped child is a violation of the sanctity of human life. However some courts defend the right for damages like for a person who is handicapped without any fault of his/her own. Some courts defining the possibility in these type of cases, encourage more care and wider scope of particularly genetic counseling and ultrasonographic tests.^{42,43}

Medical malpractice claims can be made related to cases of threatened abortion. In one of the obstetric cases that we examined the physician was found at fault for failure to diagnose threatened abortion and the result of failure to give necessary treatment to the patient was miscarriage (Table 10). In cases of threatened abortion a type of error is not diagnosing the pregnancy. Every woman of child-bearing age who has lower abdominal pain and/or vaginal bleeding should be given a pregnancy test. It is not enough to rely on patient's history for the determination of pregnancy. It is possible for a patient who has a normal menstrual period, lactation or history of contraception to be pregnant.⁴⁴

Uterine rupture that occurs during labor endangers the life of both mother and infant. The result of incidents like this can be the mother's loss of her uterus or different clinical conditions in the mother from the blood loss. The death of the mother or infant is also possible. A family that is expecting to be the owners of a child are faced instead with injury or death in the mother or infant may open a case against the person who performed the delivery.

In the 3 obstetric cases that we examined the issue was uterine rupture. In two of these cases there was

excessive external pressure placed on the uterus during labor and in these cases infant death occurred. However in the other case the uterine rupture occurred in a patient delivering vaginally who had previously delivered by cesarean. In this last case a vesico-vaginal fistula developed and the patient had to have a hysterectomy. In situations of simple separation of the scar tissue in scar tissue ruptures the upper peritoneum remains healthy the membranes that protrude from the opening in the edges of the separated scar tissue separate from the peritoneal cavity. In general this separation does not lead to hemorrhage or maternal death.³⁴

Puncturing a hole in the uterus during a termination of pregnancy procedure may lead to a claim. In a case that is in this scope that we researched the result of a careless curettage procedure was a tear in the uterus and the patient had to have a hysterectomy. A physician who is found to be negligent during a dilation and curettage procedure is responsible for doing it in this way and the resulting uterine rupture.²²

In spite of the fact that dilation and curettage is a small surgical procedure it must be done carefully. If it is done carelessly, forcefully or without showing care the patient can suffer serious injury. Uterine perforation is dangerous and perhaps occurs more frequently than is known. Uterine perforation can occur in every circumstance. While performing dilation and curettage, it is very important to know the direction of the uterus when dilating rods, an aspiration cannula, or the sharp curettage instruments are inserted into the uterus. Otherwise these instruments can lead to uterine perforation when they are inserted. The fundus of the uterus can be perforated if the instruments are inserted further than the length of the uterine cavity. For this reason when a pregnancy is evacuated the size, position and length of the uterus must be known. When these procedures are not done there is a breach in standards of care. In addition it is necessary to monitor the patient for signs of hemorrhage and infection after she undergoes a dilation and curettage procedure.

Another cause for maternal death is postpartum hemorrhage. An obstetric case in our study which led to maternal death involved failure to recognize a tear in the cuff of the uterus and retained placental fragments (Table 10). Tears in the cuff of the uterus generally occur in oversized infants, in excessive external pressure on the uterus (Kristeller maneuver), or when dilating the cuff during labor before it is fully dilated when the mother is pushing. In particular tears that occur at 3 and 9 o'clock according to the face of a clock and extend to the parametrium can be dangerous. For this reason the cuff of the uterus must be examined carefully in a woman who has vaginal bleeding after delivery. Retention of the placenta can also cause postpartum vaginal bleeding. In these types of cases the area of placenta implantation

and findings of placenta accreta are examined at autopsy.⁴⁵

Today some medical malpractice cases are the subject of the birth of an infant with congenital malformations. In these types of cases whether or not available prenatal tests were done or interpreted incorrectly or not is the basic foundation. In one of the cases we researched the issue was the birth of a malformed baby when there was an elevated alphafetoprotein (AFP) level and multiple ultrasonographic examinations (Table 10). Alphafetoprotein which is an important blood protein early in fetal life, can be used as an important sign of the health of the fetus. Alphafetoprotein passes to the mother's circulation at approximately the 16th to the 18th week of pregnancy. Correct interpretation requires both experience and skillful cooperation with the person who examined the ultrasound. The alphafetoprotein level in the blood shows an increase with the age of the pregnancy. Measurements of alphafetoprotein are used effectively to determine neural tube defects, because in more than 80% of cases the level rises during weeks 16–18 of the pregnancy. Elevated levels of alphafetoprotein also show abdominal wall defects (gastroschisis, omphalocele) and some renal disorders. Alphafetoprotein levels are also used as a screening method for Down's Syndrome because research studies have shown that in the majority of these cases the mother's alphafetoprotein level is below average.^{21,46}

Failure to diagnose oversized infants and allowing it to proceed to deliver vaginally can also be a problem for physicians. In situations like this the dead fetus's body grew proportionately larger than the head. When the infant's head passes through the birth canal out through the vulva the shoulder gets stuck, and if necessary treatment is not given in time the fetus can die.

In the case that we studied on this subject a 6000 g fetus was attempted to be delivered vaginally, subsequent to the birth of the head the shoulders got stuck and the fetus died at that time. The dead fetus was attempted to be delivered vaginally, when this was not successful, the fetus was decapitated and then the remaining portion of the fetus was removed by cesarean. A claim was then filed against the physician who failed to diagnose the oversized infant (Table 10).

In forensic obstetrics failure to diagnose an oversized infant in this manner and allowing it to proceed to be delivered vaginally is considered a breach of accepted standards of care. The claimant side will look for evidence of a large infant by having the newborn medical records and fetal heart monitor strips examined. If evidence of glucosuria or risk factors for gestational diabetes are found, many cases are based on whether or not an incorrect glucose screening test was made and/or whether or not there is ultrasonic evidence of a large for age or macrosomic fetus. In subjects of negligence and causation it is necessary to request the opinion of an

expert witness. In cases of shoulder dystocia if various indications are found related to the possibility of an oversized infant in the records or if glucose was found in the urine during prenatal exams, the likelihood increases that the courts will accept that the physician breached accepted standard of care. In situations of known or suspected macrosomic fetus it is a breach of accepted standards of care to not perform a cesarean procedure for the purpose of avoiding unwanted outcomes that can occur with vaginal delivery. It is also breach of accepted standards of care when a woman who has a positive test result for gestational diabetes is not put on a diet or when she is not examined for macrosomia.³¹

Failure to diagnosis a pregnancy can sometimes lead to claim being made. In one of the obstetric cases we examined, the physician did not diagnose pregnancy in the patient and the patient later requested a termination of pregnancy. The physician is responsible for not making a diagnosis of a current pregnancy. During the time that the physician is using accepted instruments and methods to establish a diagnosis, even if the diagnosis is wrong, when the patient is a claimant because of wrong diagnosis, the courts generally do not hold the physician responsible. Instruments and methods that are accepted by the medical profession will make it necessary for the physician to give a physical examination and do tests for the anticipated conditions related to the case. It is not essential for the physician to do tests that other physicians do or use the same examination methods. The courts accept that their adoption of different subjects related to the appropriateness and effectiveness of current medical techniques of physicians who have different educational environments and experience will be different. Thus the courts have adopted the stance that a difference of professional opinion about diagnostic or treatment methods will not be sufficient for accepting negligence. The patient must show that the procedure that the physician did contained a component of fault in his duty of care. During the time that the method a physician utilizes for diagnosis and treatment is accepted as appropriate by the profession it is difficult to prove negligence in duty to the patient for an unwanted outcome.³¹

Certainly the physician who has doubt about the accuracy of a test in a certain situation, no matter how widespread its use, should not blindly trust any laboratory test result. In this way the physician when a laboratory test is requested, if the test result is not consistent with the physician's observation together with clinical information about the patient, and if another test is not requested to evaluate the possibility of laboratory error then a component of fault exists.³¹ In some situations the final diagnosis cannot be made by relying on one physical examination or test. In these situations it may be necessary to follow or examine the patient for a long time. Even if the physician shows care necessary in making a diagnosis if another exam is not done to

confirm the diagnosis or if tests are not requested then he/she can be held responsible.³¹

When the physician practices what is necessary such as appropriate tests and evaluated necessary monitoring he/she is not responsible for a wrong diagnosis. Because all pregnancies are not alike and many other gynecologic conditions mimic symptoms of pregnancy, a wrong diagnosis is never considered negligence. If a diagnosis is made before appropriate tests are done and if the wrong diagnosis is the cause of injury to the patient, a component of negligence of failing to do necessary testing exists. The routine practice of pregnancy testing in all women of child bearing age who show symptoms of pregnancy is within the scope of standards of care. Commentators are of the opinion that the duty to do routine pregnancy testing has been accepted as standard by the courts. It is not suggesting that the physician take upon him/herself to require tests or procedures be done to the patient when the patient's condition is obvious. Before treatment that may cause injury to a fetus or mother for some illnesses is begun it must be determined whether the patient is pregnant or not. If diagnostic procedures in a patient who is of child-bearing age have the potential to cause injury to mother and fetus, it is necessary to do a pregnancy test before the procedure. In particular this situation is true for diagnostic radiology.³¹

In some cases it is necessary to get the written approval of an expert whether or not the radiation has damaging effect on the fetus and whether or not it is necessary to terminate a pregnancy. The outcome of this type of case most of the time is related to factors such as the amount of radiation together with the length of time it will be exposed and the age of the fetus.³¹

In recent years physicians have been faced with new responsibilities on the subject of diagnosing pregnancy. This responsibility in the period as early as being able to allow abortion is related to whether or not pregnancy can be diagnosed. When the physician informs a patient that she is not pregnant before doing a pregnancy test the woman who does not want to deliver a baby but will not be able to terminate the pregnancy can make a claim about this. Situations like this are the basis of medical malpractice cases. It can be claimed on the damages suffered as a result of the physician not showing prudent care at this point of the subject of diagnosis. In recent years claims have been made on physicians' rights because they have been unable to diagnose pregnancy in a period early enough to be allowed permission to terminate the pregnancy. In these cases the patient requests damages, that is in a situation where the patient states that she will end the pregnancy while the physician is making a diagnosis by showing necessary care and making the correct diagnosis of pregnancy. The requested damages include the medical expenses that will be incurred for pregnancy and delivery together with an estimate of what it will cost to raise and educate the child.³¹ A claim can be made in situations

Table 11
Obstetric risk factors that set the stage for claims

Risk factors in history	Number of cases
Grand multipara	6
Preeclampsia/eclampsia	6
Rh incompatibility	1
Maternal hypertension	3
Maternal heart disease	
Mitral stenosis	1
Aortic insufficiency	1
Large infant	3
Drug use during pregnancy	1
Post-term pregnancy	3
Marriage with close relative	1
Twin pregnancy, hyperthyroidism, myoma uterus	1
Previous pregnancy with stillbirth	3
Previous cesarean delivery	1
High AFP value confirmed in Triangle test	1
Repeated miscarriage in previous pregnancies	1

where the physician did not find a pregnancy and makes an incorrect diagnosis and gives medications that may be harmful to the fetus for the purpose of regulating the menstrual cycle. When the diagnosis is wrong and injury occurs to the fetus with medication that is used the physician is responsible for medical malpractice.³¹

The risk factors in the 33 obstetric cases than contained a component of fault was, in order of frequency: grand multipara, preeclampsia/eclampsia, maternal hypertension, post-term pregnancy, previous pregnancy with stillbirth, Rh incompatibility, maternal heart disease (mitral stenosis and aortic insufficiency), previous cesarean delivery and others (Table 11).

In cases that have a risk factor there were 12 infant deaths, 9 maternal deaths, 1 infant and maternal death, 5 hysterectomies, 5 uterine ruptures, 1 recto-vaginal fistula, and 1 vesico-vaginal fistula. In addition in one case an infant had brachial plexus paralysis and there was one case of spastic quadraparesia and infantile spasm (Table 10).

Obstetricians evaluate cases well by first determining the risk factors. When the risk factors related to pregnancy are determined treatment should be planned. In most cases a good result is obtained with early identification of risks and treatment. These types of problems must be treated with known standards of care in an appropriate manner. Failure to determine risk factors is considered a breach of standards of care. In our cases it was seen that medical malpractice claims were made for failure to manage risk factors with standards of care appropriately.

4. Summary and conclusion

Developments in medical standards of care are increasing patients' expectations of their physicians and

the medical profession.¹³ In addition to this the improvement of public education and increase in sensitivity of communication tools has led to a growing increase in the number of medical malpractice cases. Developments in newborn care have caused an increase in infants' chance for survival and also in the number of claims that are made.¹⁵ Because medical malpractice cases in obstetrics and gynecology do not only hold the specialized physicians responsible but also general practitioners and midwives who have a special responsibility to mothers it is a fact that they are face to face with large risks.¹⁴ A large number of claims of responsibility are found groundless by courts and experts.⁶ Even if the claim is groundless, the court trial is an exhausting process. Establishing good communication with the patient and next of kin, correctly explaining what will be done and where and explaining what the consequences of choices are that will be made makes it possible to avoid unfounded claims.

When medical negligence or malpractice is determined one of the important factors is knowing the conditions of the environment. There is a benefit to defining every kind of environment in which aid and care is given in the health field in Turkey and determining the minimal time requirements that are necessary in these environments. In our opinion effort should be made by not being satisfied with environmental requirements not being determined and by causing active health areas to obtain modern, quality equipment. We also believe that it is not just equipping to achieve the competence that is in well-known quality studies that has been longed for in recent years but making possible the education of the team that will use the equipment is an important part of the standardization of an organization. It should not be forgotten that health is a right. Correctly determining the environmental requirements for possible places of treatment is a part of separating cases of negligence in medical malpractice from those without fault.

From the standpoint of legal responsibility finding fault with physicians' behaviors, the issue in a situation is whether or not they completely fulfilled their duty with the necessary care and faithfulness that is expected. When investigating whether or not a fault is found in a case, the points that need to be considered are whether or not they behaved in a manner consistent with basic principles of medical science, whether or not the conditions practiced in the medical profession show the professional knowledge and skill competence that is necessary to be demonstrated under the same conditions by an average physician, whether or not measures are taken to prevent possible complications and when complications occur whether or not treatment is given in a necessary manner. A standard of care can be defined as the necessary care that needs to be given in a similar case that an average physician under the same

conditions at the same level of competence would give. In addition to the need to define and correct the environmental conditions in our country there is also a need to define standards of care. In our opinion it is the required responsibility of physicians to develop standards of care themselves which are standards of the modern world. For physicians and other health care personnel to avoid being held responsible in claims they must learn well their medical and legal authority and responsibilities, must not act contrary to their care responsibilities, and must not go beyond the bounds of their authority.

One of the most important points that arises from legal responsibility are the mistakes that are made in records. Cases in which the records have not been kept or have been changed, erased, or scraped are evaluated as being impossible to defend in court.

From the moment that a physician meets a patient unless the patient is rejected immediately it is necessary for the physician to remember that he/she has assumed responsibility for the patient, to keep in mind the legal responsibilities in the process of all diagnosis, treatment and, if necessary, monitoring and not to breach medical standards of care. We want to remind physicians that explaining about problems that can occur when treatment is not given to a patient, the method and duration of treatment, side effects and complications that can occur from treatment in a detailed manner and recording every step is a basic foundation.

For the purpose of having examples for physicians who will give medical care and to prevent repeated mistakes it will be beneficial for records that contain claims of medical malpractice to have included in writing the reason for decisions that are reported of experts' opinions, explanations of evidence that leads to conviction and the scientific environment in which they were announced.

In cases which involve maternal or infant death it is very important that an autopsy is done, conditions clearly special to the case are met, and an expert's evaluation to form the basis for available material evidence. In the beginning in every case where death occurs, even if it is perceived that a case will be a legal one, an autopsy is requested that may later show that it was unfounded and be important in protecting against unwarranted claims and is a part in assuring justice is served.

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