

## Comparative Study of Therapeutic Abortion Permissions in Central Clinical Department of Tehran Legal Medicine Organization before and after Approval of Law on Abortion in Iran

Shabnam Bazmi<sup>\*1</sup>, MD; Behnam Behnoush<sup>2</sup>, MDe; Mehrzad Kiani<sup>1</sup>, MD; Elham Bazmi<sup>1</sup>, PharmD

1. Legal Medicine Organization of Iran
2. Department of Forensic Medicine, Tehran University of Medical Sciences, IR Iran

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### Abstract

**Objective:** Before approval of therapeutic abortion law in parliament in 2003 there was severe restriction for abortion permissions in Iran. At that time "The Guidelines for Therapeutic Abortion" containing indications for abortion was presented by Legal Medicine Organization of Iran (LMO). Parliament and Islamic Consultative Assembly approved this in 2005.

**Methods:** This study includes all cases referred to the clinical examination department of LMO in central region of Tehran to get permission for therapeutic abortion during one year before approval of therapeutic abortion law (first study from June 1999 to the end of May 2000) and after that (second study from early October 2006 to the end of September 2007). Information was collected via completion of pre-designated forms, the data of the two groups analyzed with SPSS software and compared.

**Findings:** In the first study only 126 permissions were issued; 17% fetal disorders (major Thalassemia was the only considered case at that time) and 83% maternal indications were the reason to issue permission for abortion. In the second study in 85.36% of cases fetal disorders and in 14.63% maternal diseases were indications for abortion; the major fetal and maternal indications were: anencephaly and cardiovascular problems.

**Conclusion:** This study shows that in spite of all efforts made so far to legalize therapeutic abortion, we have to keep working on the issue and perhaps some other diseases should be added to the list of indications in future.

**Key Words:** Therapeutic abortion; Fetal anomalies; Maternal disease; Abortion law; Illegal abortion

\* Correspondence author;

Address: Legal medicine organization, Behesht st, Tehran, IR Iran

E-mail: shabnam71776@yahoo.com

## Introduction

In medical terminology, *Abortion* is defined as the removal of products of conception from the uterus before fetus is sufficiently developed to survive or, in other words, before the 20<sup>th</sup> week of pregnancy<sup>[1]</sup>. Each year about 79 million unintended pregnancies, excluding miscarriages, occur worldwide; more than half of these unintended pregnancies lead to abortion<sup>[2]</sup>. *Therapeutic abortion* is defined as intentional termination of pregnancy performed or authorized by a physician in order to save the mother's life and health<sup>[3,16]</sup>. It follows different rules in different countries.

In Iran, before 1991 therapeutic abortion encountered severe restrictions due to different cultural and religious atmosphere dominating the society. In the same year, abortion before ensoulment (in four months after conception or 18 weeks after the last period) was permitted in Iran only to save the mother's life<sup>[3,14]</sup>. The lack of law for *legal abortion due to fetal abnormalities and diseases* found a practical solution in 1997 following a *fatwa* issued by our supreme leader Grand Ayatollah Seyyed Ali Khamenei that permitted the abortion of the fetus with *Thalassemia major*. It was entered into a new phase after draft of the bill "*The Guidelines for Therapeutic Abortion*" by Legal Medicine Organization (LMO) of IR Iran in 2003. Islamic Consultative Assembly passed the indications determined by LMO in 2005<sup>[4]</sup>.

According to the executive guidelines of this rule, indications for abortion are divided into two major groups:

1. Termination of pregnancy to save the mother's life or when the mother's health is severely threatened.

2. When continuing pregnancy according to medical documentations and approval of related specialists may lead to the birth of malformed or mentally retarded child or may put mother in *haraj* (intolerable difficulty)<sup>[5]</sup>. Abortion indications are divided into maternal and fetal groups (Table 1). The Islamic Consultative Assembly voted to approve them in 49 items (see Appendix).

### Conditions for receiving requests and permission issuance for abortion:

Any request for issuing permission for therapeutic abortion is merely acceptable through the legal medicine administrative offices and only after being applied by judicial authority or the couples before ensoulment of the fetus (4 months after fertilization).

The application must have the patient's photo attached and stamped with her physician's signature, and contain all personal information, documents and method of diagnosis, signs, symptoms and the results of examinations. It must contain a copy of identification card, documents to prove the legality of marriage and also the results of paraclinical examinations with the patient's photograph (stamped with identification information and signature) sealed on it.

The present study comparatively considers the permitted abortion cases before (from June 1999 to the end of May 2000) and after (from October 2006 to October 2007) approval of 49 items in Islamic Parliament.

## Subjects & Methods

This is a historical descriptive case study based on cases referred to the clinical examination department of LMO in central

**Table 1-** Clinical and para clinical documents needed for issuing permission for abortion

Documents	Fetal Indication	Maternal Indication	Out of the Determined List
Ultrasonography	At least twice	At least once in order to determine GA	According to maternal and fetal indication
Consultation	At least twice	At least twice	At least three times

**Table 2-** Comparison of maternal and fetal age in the two studies

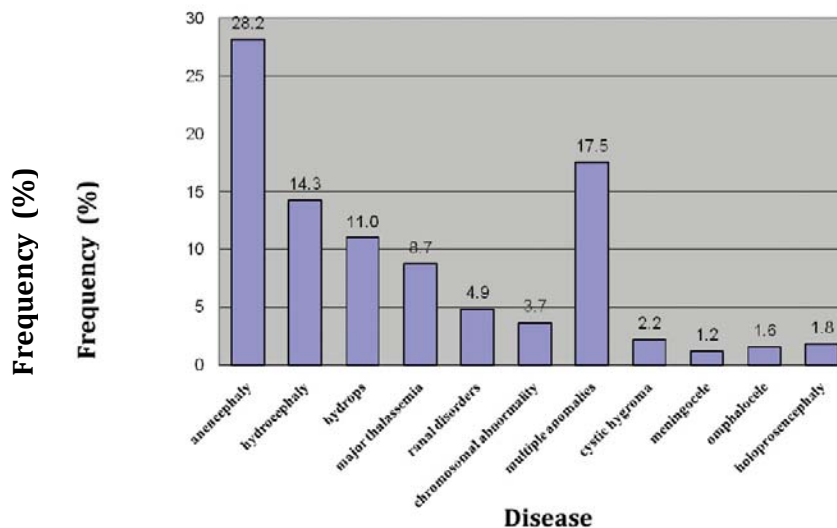
Group	Fetal age (weeks)		Mother's age (years)	
	Mean (SD)	Range	Mean (SD)	Range
1	10.2 (2.3)	4-16	30.8 (10.2)	16-48
2	14.3 (2.4)	4-18	28.5 (9.7)	15-47

region of Tehran to get therapeutic abortion permission during one year before approval of therapeutic abortion law (first study from June 1999 to the end of May 2000) and after that (second study from early October 2006 to the end of September 2007). Incomplete or not trustful applications are omitted from the study. Information needed to perform this study like mother's age, fetal age, fetal abnormalities, mother's disease and number of experts needed to examine and confirm the determined diseases were collected via completion of pre-designed forms, analyzed with SPSS software and the results compared in the two groups. As ethical point, all data are collected secretly and no name or other personal information is recorded in our designed forms.

## Findings

In the first study only 126 permissions were issued in clinical examination department of LMO in central region of Tehran, in 17% of which fetal indications (Thalassemia major was the only considered case at that time) and in 83% maternal indications were the reason to issue permission for abortion. In the second study 574 permissions for abortion were issued, in 490 (85.4%) cases of which fetal disorders and in 84 (14.6%) cases, maternal diseases and disorders were the reason to issue permission.

The comparative study of mother's age and fetal age is indicated in table 2. Frequency distribution of fetal indications of therapeutic abortion in the second group is categorized in diagram 1.



**Diagram 1-** Frequency of fetal indications for therapeutic abortion in the second study

**Table 3-** Maternal indications for therapeutic abortion in the second study

Category disorder	Disease	Frequency
<b>Heart disease (22.6%)</b>	Valvular disorders	13.1%
	Dilated cardiomyopathy	9.5%
<b>Neurologic disorders (14.3%)</b>	MS	11.9%
	MG	2.4%
<b>Malignancy (14.3%)</b>	Breast cancer	4.8%
	Brain tumor	2.4%
	Thyroid cancer	1.7%
	Nasopharyngeal lymphoma	1.7%
	Melanoma	1.7%
	Colon cancer	1.7%
	Ulcerative colitis	1.7%
<b>Renal disease (11.9%)</b>	Hypertension	4.8%
	Renal failure	7.4%
<b>Autoimmune (9.52%)</b>	SLE	8.3%
	Scleroderma	1.2%
<b>Vessel abnormality (7.1%)</b>	Saphenous vein thrombosis	3.6%
	Intracranial sinus vein thrombosis	3.6%
<b>Infectious diseases (5.6%)</b>	AIDS	3.6%
	Hepatitis	2.4%
<b>Hematologic disorders (4.8%)</b>	Fanconi's anemia	2.4%
	Hemophilia	2.4%
<b>Dermatologic disorders</b>	Pemphigus vulgaris	2.4%
<b>Pulmonary disease (2.4%)</b>	Asthma	1.2%
	Bronchiectasis	1.2%
<b>Psychological problems</b>	Depression	1.2%
<b>Liver disease</b>	Wilson's disease	1.2%
<b>Multiple diseases</b>		1.2%

Thalassemia major was the only indication for therapeutic abortion in the first study, frequency distribution of fetal and maternal indications are shown in diagram 2. Maternal indications for therapeutic abortion are shown in table 3.

It should also be pointed out that in study 2 and fetal indications, 4.9% of cases of

therapeutic abortion indications were related to renal abnormalities, in 15 (2.61%) cases of which kidneys were polycystic, in 5 (0.87%) cases kidney agenesis and in 0.69% bilateral hydronephrosis was observed. Chromosomal abnormalities (3.67% of all cases), consisted of Down syndrome 14 (2.58%) cases, trisomy 13 and XXX each two cases.

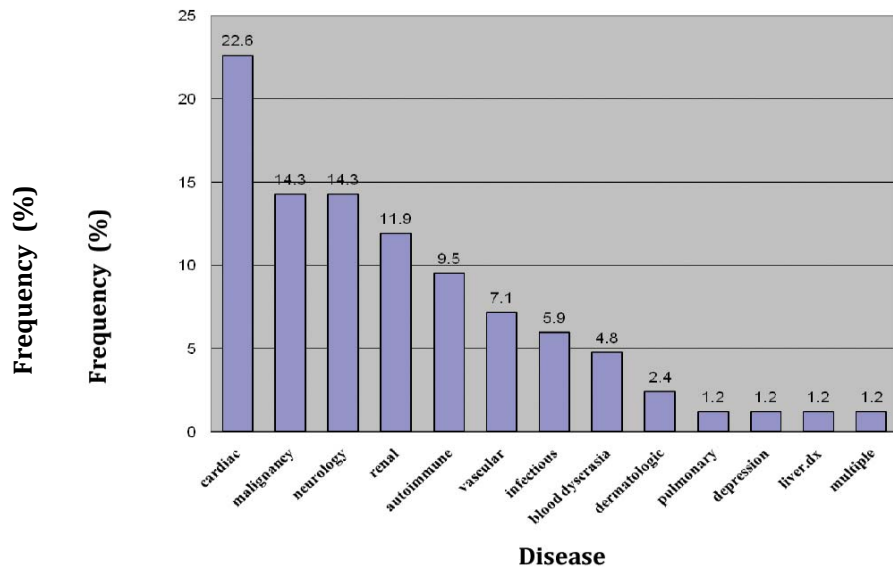


Diagram 2- Frequency of abortion indications in the first study

## Discussion

As for mothers' mean age, the results of this study were very close to those of other similar studies from Iran (29.4 and 28.6 years)<sup>[7]</sup>, while according to the studies in USA (1980), the abortion cases in under 14 and over 40 year-olds were twice more than abortion in women aged between 25–29 years<sup>[9]</sup>. Also another study performed in United States indicates that 51% of all abortion cases in that country relate to the women under 24<sup>[10]</sup>. Therefore with regard to the young age pyramid in Iran, which is the counterpoint of the age pyramid in American society, such difference seems to be mostly originated from religious beliefs, cultural and social conditions.

Concerning fetal age distribution in this study and the rules for therapeutic abortion in Iran that permit the abortion only before ensoulment (GA: 18-20 wk), it is clear that there are some differences between Iran and other, specially non-Muslim, countries in this field. This age was estimated as 12.8 weeks in a similar study in Iran<sup>[8]</sup>.

Among maternal indications in this study, heart diseases had the highest range (22.61%), the second one being different malignant and neurological diseases (each one

with 14.28%) and in the last order renal diseases are situated (11.9%). In comparison with a similar study performed in Iran in 2003<sup>[11]</sup>, heart diseases with 28.2% stand in the 1<sup>st</sup> order, and kidney diseases with 17.4% in the 2<sup>nd</sup> order. This may have some relation to increasing incidence rate of virulent and neurological diseases like Multiple Sclerosis and Breast Cancer, or decreasing onset age and earlier diagnosis of these diseases.

Taking the fetal indications into consideration, we see that in most cases (17.5%) Anencephaly and multiple abnormalities were the indications to issue permission for therapeutic abortion. Hydrocephaly in 14.28%, Hydrops in 11.02% and Thalassemia major in 8.57% were in the next stages. Regarding other similar studies<sup>[12,7]</sup> that have considered Thalassemia major with 25.4% in the second stage of fetal indications, it seems that the premarital laboratory examinations in order to find individuals with Thalassemia minor have played an important role in decreasing the prevalence of this disease. With regard to the issuance of permission for therapeutic abortion 4.5 times more than in 1999 and paying much attention to the subject that near one fourth of all permissions relating fetal and

maternal indications are cases which could not have received abortion permission before the ratification of the law on abortion by the parliament in 2005, we come to the conclusion that, more freedom to choose therapeutic abortion legally will definitely lead to decrease in the rate of illegal abortions. A study in the early 1990s in a hospital in Tehran shows that near 10% of 1115 cases referred to LMO due to the effects of abortion, were the individuals who had committed illegal abortion<sup>[11]</sup>. In fact before the ratification of the abortion law, fatality due to septic abortion was considered as a real health problem especially in low socioeconomic people. As the reflection of ratification of this law, little by little, we can see now less challenges and problems in this field<sup>[12]</sup>.

Finally with regard to the issue that in 35.19% of the cases, the permission for abortion was accepted according to confirmation of 3 legally authorized specialists, we can understand that 1.3% of issued permissions were due to mother or fetal diseases which have not been added to the approved list of the parliament yet.

There were some limitations in this study. Some individuals did not consult LMO and performed abortion illegally. Also, some of the applicants did not cooperate sufficiently with our colleagues in filling the forms or they were not familiar enough with the terms mentioned in the forms in some cases. Although the problem has been solved to some extent through presenting additional explanation to them (illiterate or less educated applicants were assisted by the personnel of Clinical Examination Section in filling the forms).

## Conclusion

This study and all similar studies in this field, show that in spite of all efforts made so far to legalize therapeutic abortion, it is not yet time to stop working on the issue; perhaps some more diseases should be added to the list of indications in future. This definitely needs

joint cooperation of different authorities, namely governmental and judicial organizations. In fact with regard to development of medical science and structural varieties in human societies, we should pay more attention to the subject as this is not only important in our country, but also in other (especially Muslim) countries and negligence of it can cause health and social problems. The effects of septic abortions in public health<sup>[14,15]</sup>, giving birth to malformed children that impose both economic and social problems to the family and society, are some examples. The recent ratification of the law on therapeutic abortion in Iran by the parliament can be a significant guide for other Islamic countries in this field.

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## References

1. Cunningham F. Williams Obsteric and Gynecology, 19th ed. 1993; pp 979-86.
2. Nojoomi M, Akbarian A. Burden of abortion: induced and spontaneous. Arch Iran Med. 2006; 9(1): 39-45.
3. Medical Council of Islamic Republic of Iran issues, The executive permission to the law on therapeutic abortion (Persian), 2005.
4. Sadr Sh. Indications for abortion in diseases that may bring about death risk for mother and in any kind of fetal abnormalities or diseases that may lead to stillbirth. Bill of Therapeutic Abortion. Tehran, 2002.
5. The Islamic Law of Punishment. Iranian Official Newspaper 1991.

6. Erfani A. Abortion in Iran: What do we know? Available at: <http://Sociology.uwo.ca/popstudies/dp/dp08-01.pdf>. Accessed date: Jan, 2008.
7. Tofighi H, Moosavi-pour F, Barooni Sh. A study on the application for permission of abortion therapy from LMO. June 1999-May 2000. Scientific J Legal Med Org. 2001, 7(22):1-7.
8. Sadr Sh, Abedi MH. A survey on abortion permissions issued by Legal Medicine Organization during 1 year. Scientific J Legal Med Org. 2005; 11(4): 198-200.
9. Warren m.Hern. ;The epidemiologic foundation of abortion practice from abortion practice Med Ethics: 2004;17(2):18-24.
10. Koonin LM, Smith JC, Ramick M. Abortion surveillance. MMWR. 1992;41(1):1-33.
11. Moeeni A, Amid G. A survey on intentional abortions in comparison with spontaneous abortion in Tehran Ruintan Arash hospital, 1992-1995. Scientific J Legal Med Org. 1998; 5(1):71-4.
12. World Health Organization. Unsafe abortion: global and regional estimates of the incidence of unsafe abortion and associated mortality in 2000. 4<sup>th</sup> ed. Geneva, WHO, Division of Reproductive. 2004.
13. Fallahian M, Mohammad-zadeh F. Trends in abortion in Iran 1994-2002. Arch Iranian Med. 2005;8(3):217-8.
14. Roudi N. Iran eases limlts on sterilization. Popul Today 1991;19(3):30.
15. Majlessi F, Forooshani AR. Prevalance of induced abortion and associated complications in women attending hospitals in Isfahan, East Mediter Health J. 2008;14(1):103-9.
16. Erfani A, McQuillan K. Rates of induced abortion in Iran: The roles of contraceptive use and religiosity. Stud Fam Plan. 2008; 39(2):111-22.
17. Hedayat KM, Shooshtarizadeh P, Reza M. Therapeutic abortion in Islam: contemporary views of Muslim Shiite scholars and effect of recent Iranian legislation, J Med Ethics. 2006;32(11):652-7.

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## Appendix: Fetal and Maternal Indications of Therapeutic Abortion in Iran

### I. Maternal Indications

#### Cardiovascular

1. Any of the cardiac valve diseases with functional class 3-4 heart failure that is not reversible to class 2.
2. Any kind of acute heart disease except Coronary Heart Disease that has reached functional class 3-4, e.g. Myocarditis and Pericarditis
3. History of dilated cardiomyopathy in previous pregnancies
4. Marfan syndrome, when ascending aorta is wider than 5 cm
5. Eisenmenger's Syndrome

#### GI system

1. Pregnancy induced fatty liver
2. Grade 3 esophageal varicosis
3. History of esophageal varicosis hemorrhage followed by portal hypertension
4. Uncontrollable autoimmune hepatitis

#### Nephrology

1. Renal failure
2. Hypertension which is not controllable with permitted drugs during pregnancy

#### Respiratory System

- Any of the pulmonary diseases that leads to pulmonary hypertension even to a mild degree (emphysema, fibrosis, diffuse bronchiectasis)

#### Infectious Diseases

- Any infection with HIV virus which has entered into the phase of AIDS disease

#### Hematology

- Hypercoagulability, when using heparin leads to progression of other disease that can threaten mother's life.

#### Rheumatology

1. Active uncontrollable SLE which has involved a major organ
2. Vasculitis (when major organs are involved with)

#### Neurosurgery

- All CNS masses with considering their type and location, when beginning the treatment is dangerous to fetus and without treatment mother's life may be threatened

#### Dermatology

- Pemphigus Vulgaris and Severe Generalized Psoriasis and advanced Melanoma which are considered as serious threats for mothers' life

#### Neurology

1. Multi-drug resistant epilepsies
2. MS cases in which the patient was disabled
3. Myasthenia Gravis in advanced stages on condition that has serious risk for mothers' life
4. Some type of Motor neuron diseases like ALS which is intensified following by pregnancy and will seriously endanger mothers' life

### II. Fetal Indications

- Osteogenesis imperfecta
- Osteochondrodysplasia
- Osteopetrosis infantile
- Bilateral renal agenesis
- Polycystic kidney
- Multicystic dysplastic kidney
- Potter syndrome
- Congenital nephrotic syndrome and hydrops
- Severe bilateral hydronephrosis
- Alpha thalassemia and hydrops fetalis
- Thrombotic disorders
- Trisomy 13, 18, 3, 16, 8
- Anencephaly
- Cat cry syndrome
- Holoprosencephaly
- Syringomyelia
- Cranioschisis
- Meningoencephalocele
- Meningohydroencephalocele
- Tanatophoric dysplasia
- Cyclopia with holoprosencephaly
- Ichthyosis congenita neonatom
- Schizencephaly