The effect of a policy change on late termination of pregnancy in Israel

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Objective: To compare approval rates of late termination of pregnancy (LTOP) requests before and after a policy change in Israel in late 2007.

Methods: In a retrospective study, LTOP requests and board decisions from 2002–2007 (group 1) were compared with those from 2007–2012 (group 2) at 3 university-affiliated medical centers in Israel. Reasons for application, approval, or rejection were compared between the groups.

Results: There were 552 applications for LTOP. The overall approval rate for LTOP and the specific approval rate per medical indication did not differ significantly between the groups. The rate of requests due to confirmed genetic anomalies decreased from 18.4% in group 1 to 11.3% in group 2 (P = 0.03). Compared with group 1, the rate of rejection for intrauterine infection increased from 8.3% to 26.3% (P = 0.2), and that for pregnancy complications decreased from 62.5% to 35.0% (P = 0.2) in group 2 but these differences were not statistically significant. Requests due to structural anomalies were declined because they were considered to be minor cardiac, renal, cerebral, or skeletal anomalies.

Conclusion: The more stringent 2007 criteria for approving requests for LTOP did not affect the rate of rejection of requests due to structural anomalies between the 2 time periods.

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specific specialist counseling [9]. This cut-off separates mild from moderate handicap. The result of this change is that a mild physical or developmental disability that does not affect the ability to perform routine activities of daily living is not an approved indication for LTOP.

Rejection of LTOP request might result in unexpected infant morbidity, handicap, and legal proceedings due to medical negligence. The aim of the present study was to compare indications and approval rates between 2 cohorts of LTOP requests made before and after the policy change in late 2007 in Israel.

2. Materials and methods

In a retrospective cohort study, information was reviewed from documented patient requests for LTOP and board decisions from January 1, 2002, to 31 December, 2012, at 3 university-affiliated medical centers in Israel. The study was approved by the institutional review boards of all 3 centers and informed consent was not required.

The records of the 3 centers were initially examined separately; all of the records included in the study were then reexamined by 1 researcher (R.A.). Patients were categorized as group 1 (requests from January 2002 until December 2007, before the policy change) and group 2 (January 2008 until December 2012, after the policy change). The data extracted from the records included demographics (age, parity, gravidity, gestational age), reason for LTOP request, sonographic or genetic findings, board decision, and reasons for rejected cases.

The data were entered into an Excel spreadsheet (Microsoft, Redmond, WA, USA). SPSS version 20.0 (IBM, Armonk, NY, USA) was used for statistical analysis. Groups were compared via Student t test for ordinal data and χ² test or Fisher exact test for categorical data. A P value of 0.05 or less was considered statistically significant.

3. Results

During the study period, there were 552 applications for LTOP across the 3 medical centers. One medical center had application documentation from 2002 to 2012, the second had documentation from 2006 to 2012, and the third had documentation from 2007 to 2011. The applicants had a mean age of 30 ± 5.6 years. Group 1 included 163 patients and group 2 included 389 patients (Table 1). In both groups, most applications were submitted between the 24 + 0 and the 27 + 6 week of gestation, but the percentage of applications submitted in this period was higher in group 1 than in group 2 (60.7% vs 48.8%, P = 0.01). The indications for LTOP requests are presented in Table 1. Of note, fetal structural anomalies were the dominant indication for LTOP requests in both group 1 and group 2 (61.3% and 63.0%, respectively).

The overall approval proportion of LTOP and the proportion approved per specific medical indication were not significantly different between the groups. The rate of requests due to confirmed genetic anomalies decreased between the 2 time periods from 18.4% in group 1 to 11.3% in group 2 (P = 0.03).

Overall, 67 requests were denied (21 in group 1 and 46 in group 2). Twelve of 100 (12.0%) requests in group 1 and 23 of 245 (10.2%) requests in group 2 due to a confirmed structural anomaly were denied. These were rejected because the probability of handicap was below 30%; the main anomalies for which LTOP requests due to structural anomaly were denied because they were considered mild included mild cerebral ventriculomegaly, clubfoot, ventricular septal defect, unilaterial multicystic or agenesis of kidney, echogenic kidneys, severe fetal unilateral hydronephrosis and mild hydronephrosis in the contralateral kidney, atrial–septal defect, aortic stenosis, enlarged ascending aorta, and short long bones.

In both groups, the second most common category of LTOP requests was a confirmed genetic anomaly; however, the percentage was significantly lower in group 2 than in group 1 (P = 0.03). Three requests (1 in group 1 and 2 in group 2) for confirmed genetic anomalies (balanced translocations) were denied because the anomalies were considered clinically insignificant.

The rejection rate of requests due to confirmed intrauterine fetal infection was higher in group 2 than in group 1, but the difference did not reach statistical significance (8.3% vs 26.3%, P = 0.2). In this category, which included mainly CMV infection, the requests were rejected in both groups because no fetal damage had been demonstrated.

Most pregnancy complication requests included cases of oligohydramnios with or without preterm premature rupture of membranes and FGR (4.9% in group 1 and 5.1% in group 2). These requests were due to imminent delivery, potential prematurity complications, and uncertain diagnosis. The rejection rate in this category of pregnancy complications was higher in group 1 (62.5%) than in group 2 (35.0%), although the decrease was not statistically significant. Requests for non-medical indications were significantly greater in group 2 than in group 1 (7.9% vs 15.7%, P = 0.02), but the rejection rate was similar.

4. Discussion

The present study has compared the indications for and number of LTOP requests approved in Israel before and after a policy change. The policy change permits LTOP for fetal anomalies only when the probability of handicap is 30% or more. The main findings were that the overall approval rate for LTOP and the specific approval rate per medical indication have not significantly changed since the policy change. In addition, the rate of requests owing to confirmed genetic anomalies decreased after the policy change; this might be due to earlier detection of fetuses with genetic abnormalities and earlier termination of pregnancies. Furthermore, compared with group 1, the group 2 rejection rate due to intrauterine infection was higher and that due to pregnancy complications was lower, although neither difference was statistically significant.

Ultrasound imaging has a key role in prenatal diagnosis and provides reliable information about severe structural abnormalities in the fetus. LTOP is requested by parents or advised by healthcare providers when fetal anomalies are detected. In the Netherlands, it is performed when severe structural abnormalities are found that are incompatible with postnatal survival, including anencephaly, absence of renal function, and trisomies 13 and 18. Women with fetuses with less severe anomalies and lesser handicap, such as hydrocephaly or spina bifida, may also request LTOP. All of these requests must be discussed by a team that includes gynecologists, a pediatrician, a pediatric surgeon clinical geneticist, and the family general practitioner [2].

### Table 1

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<thead>
<tr>
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<tbody>
<tr>
<td>Gestational age at application, wk + d</td>
<td></td>
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<tr>
<td>24 + 0 to 27 + 6</td>
<td>99 (60.7)</td>
<td>190 (48.8)</td>
<td>0.01</td>
</tr>
<tr>
<td>28 + 0 to 31 + 6</td>
<td>32 (19.6)</td>
<td>94 (24.1)</td>
<td>0.2</td>
</tr>
<tr>
<td>32 + 0 to 40 + 0</td>
<td>32 (19.6)</td>
<td>105 (27.0)</td>
<td>0.07</td>
</tr>
<tr>
<td>Suspected fetal anomaly</td>
<td>142 (87.1)</td>
<td>308 (79.2)</td>
<td>0.03</td>
</tr>
<tr>
<td>Confirmed genetic anomaly</td>
<td>30 (18.4)</td>
<td>44 (11.3)</td>
<td>0.03</td>
</tr>
<tr>
<td>Rejections</td>
<td>1 (3.3%)</td>
<td>2 (4.3%)</td>
<td>0.98</td>
</tr>
<tr>
<td>Confirmed structural anomaly</td>
<td>100 (61.3)</td>
<td>245 (63.0)</td>
<td>0.7</td>
</tr>
<tr>
<td>Rejections</td>
<td>12 (22%)</td>
<td>19 (49)</td>
<td>0.2</td>
</tr>
<tr>
<td>Confirmed intrauterine infection</td>
<td>8 (4.9)</td>
<td>5 (263.1)</td>
<td>0.2</td>
</tr>
<tr>
<td>Rejections</td>
<td>12 (7.4)</td>
<td>19 (4.9)</td>
<td>0.2</td>
</tr>
<tr>
<td>Pregnancy complications</td>
<td>4 (2.5)</td>
<td>3 (1.5)</td>
<td>0.9</td>
</tr>
<tr>
<td>Fetal growth restriction</td>
<td>9 (5.5)</td>
<td>2 (0.5)</td>
<td>0.9</td>
</tr>
<tr>
<td>LTOP</td>
<td>9 (5.5)</td>
<td>2 (0.5)</td>
<td>0.9</td>
</tr>
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</table>

Abbreviations: FGR, fetal growth restriction; LTOP, late termination of pregnancy; TTTS, twin-to-twin transfusion syndrome.

a Values are given as number (percentage) or number (percentage of specific indication) (percentage of total requests).

b Comparison regarding specific indication.
The British Abortion Act of 1967, amended in 1991, allows 2 medical practitioners to legally approve LTOP. According to a report issued by the Royal College of Obstetricians and Gynaecologists [3], late terminations were performed in England in 1996 for indications such as dwarfism, trisomy 21, and spina bifida. Chervenak et al. [4] have also raised this issue in the United States, claiming that LTOP is appropriate only for anomalies that are lethal or associated with absence of cognitive capacity.

In different provinces of Australia, LTOP is legal when maternal health is at risk with or without severe fetal abnormality [5]. Various fetal and maternal conditions may lead to parental request for LTOP—most frequently, late second-trimester findings of a fetal structural anomaly. Dommergues et al. [10], Vaknin et al. [11], and Aslan et al. [12] demonstrated in their series that diagnosis of the fetal anomaly could have been made earlier for 30–50% of the pregnant women undergoing LTOP. Dommergues et al. [10] stated that early diagnosis and prognosis are limited for some fetal anomalies, resulting in delayed LTOP requests and board decisions.

Savulescu [5] stated that the criteria for LTOP are applied inconsistently. Consensus is lacking with regard to which abnormalities are severe enough to warrant termination. This implies that the options available to a particular patient are likely to be determined by the subjective values of the practitioner that she happens to encounter. For example, approximately 75% of clinical geneticists and obstetricians specializing in ultrasound believed that termination should be available for dwarfism at 24 weeks, but 25% did not [5].

Until 2007, requests for LTOP in Israel were seldom rejected because there was no cut-off level for severity of fetal anomaly that could be used by committee members for approval or rejection of LTOP requests [13]. To overcome the lack of consensus regarding the severity of fetal abnormalities that qualify for LTOP, the Israeli Ministry of Health issued specific guidelines for approval of LTOP requests for fetal anomalies in 2007. Approval is granted only when the probability of handicap is 30% or greater according to specialist counseling [9]. This cut-off is considered a mild handicap that would not result in a need for assistance in activities of daily living. There are large variations in the outcomes of many pathologic ultrasound findings, but additional fetal magnetic resonance imaging findings and recent developments in genetic work-up may add more conclusive information with regard to the severity of the handicap. Although the cut-off point might be difficult to define, it was expected that fewer LTOP requests for fetal anomalies would be approved because they would not meet this value.

The present results did not find a significant change in the rejection rate between the 2 time periods, probably because of the small sample size and difficulties in defining the 30% handicap cut-off. However, it seems that amniocentesis-proven CMV infections will continue to qualify less frequently as an indication for LTOP unless fetal damage is demonstrated on ultrasound or magnetic resonance examination (9.1% and 26.3% of the requests were rejected in groups 1 and 2, respectively). Fetal anomalies are a serious rationale for considering abortion, and the growing use of ultrasound in pregnancy has led to an increase in the diagnosis of these abnormalities. In light of the lack of consensus about which abnormalities are severe enough to warrant termination, attitudes and policies of different societies regarding LTOP need to be clarified, especially in countries where there is no gestational age limit for performing termination of pregnancy. In Israel, the stricter criteria for LTOP published in 2007 by the Ministry of Health did not change overall approval or rejection rates for LTOP.

Conflict of interest

The authors have no conflicts of interest.

References