Management of Medical Termination of Pregnancy (MToP) up until the 7th week of gestation in the Czech Republic

**Objective:** In the Czech Republic (CR), it is possible, to carry out Medical Termination of Pregnancy (MToP) in the 1st trimester since June 2014, in case a woman submits a written request for it and in case the ultrasound examination confirms an intrauterine singleton prosperous pregnancy, between day 42 and 49 of gestation, crown-rump length (CRL) of the embryo 2-9 mm. The aim of the study is to analyze the management of MToP up until the 7th week of gestation in five centres in the CR.

**Methods:** Multicenter cohort (prospective) study. In 2014-2016, a total of 1820 pregnant women requested MToP. The diagnosis of an intrauterine singleton prosperous pregnancy was set by transvaginal ultrasound, CRL 2-9 mm. MToP was carried out by combination of mifepristone (600 mg orally) and misoprostol (400 mcg orally) within 48 hours. MToP follow up (exclusion of ongoing pregnancy) after 2-3 weeks was carried out by transvaginal ultrasound as well.

**Results:** In 11.0% of women (201/1820) who requested MToP, CRL > 9 mm, unprosperous, multiple or ectopic pregnancy was diagnosed. In the remaining 1619 women MToP was carried out, but in 221 cases (13.7%) at least one additional pre-first visit was needed before the diagnosis of intrauterine singleton prosperous pregnancy CRL 2-9 mm could be established, in 19 cases (1.2%) two pre-first visits and in 5 cases (0.3%) even three. Gestational age was 42-49 days (average 47.1, median 47), the women were 14-47 years of age (average 30.7, median 30). In 20.8% of women (336/1619) MToP follow up was missed and of the remaining 1283 women, ongoing pregnancy (MToP failure) was diagnosed in 1.6% (21/1283), incomplete abortion in 6.5% (83/1283) and complete abortion in 91.9% (1179/1283). A subsequent surgical intervention was carried out in 7.4% of women (95/1283).

**Conclusion:** A medical facility performing MToP in the 1st trimester should develop its own methodology in accordance with the legislation in force, Summaries of Product Characteristics, and recommendations of professional associations. The methodology should also include a method of evaluation of the result and management. The subsequent surgical intervention should only be performed in indicated cases. The main goal of MToP follow up is to exclude ongoing pregnancy (MToP Failure), and the patient should be informed in detail about the risks involved and possibilities of their solution, it is necessary to obtain an informed consent.

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**Table:**

**Medical Termination of Pregnancy (MToP) up until the 7th week of gestation - material, methods and results in five centres in the Czech Republic.

<table>
<thead>
<tr>
<th>Centre</th>
<th>Material</th>
<th>Methods</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - University Hospital Olomouc</td>
<td>Hospital Na Bulovce in Prague</td>
<td>The Institute for the Care of Mother and Child in Prague</td>
<td>General University Hospital in Prague</td>
</tr>
</tbody>
</table>
| 2 | hCG / US / CSF test* | Follow up 2-3 weeks after misoprostol | In 11.0% of women (201/1820) who requested MToP, CRL > 9 mm, unprosperous, multiple or ectopic pregnancy was diagnosed. In the remaining 1619 women MToP was carried out, but in 221 cases (13.7%) at least one additional pre-first visit was needed before the diagnosis of intrauterine singleton prosperous pregnancy CRL 2-9 mm could be established, in 19 cases (1.2%) two pre-first visits and in 5 cases (0.3%) even three. Gestational age was 42-49 days (average 47.1, median 47), the women were 14-47 years of age (average 30.7, median 30). In 20.8% of women (336/1619) MToP follow up was missed and of the remaining 1283 women, ongoing pregnancy (MToP failure) was diagnosed in 1.6% (21/1283), incomplete abortion in 6.5% (83/1283) and complete abortion in 91.9% (1179/1283). A subsequent surgical intervention was carried out in 7.4% of women (95/1283). |**Note:** This table includes data from the main article and the supplementary material. Further details and additional data are available in the full publication.**

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**Figure:**

**Scheme 1:** Medical Termination of Pregnancy (MToP) up until the 7th week of gestation - diagnosis of pregnancy and management of the procedure according to gestational age

- Setting the diagnosis of an intrauterine singleton prosperous pregnancy by ultrasound examination, and the dating of pregnancy according to the crown rump length (CRL) of the embryo. At CRL < 2 mm, it is possible to prove a prosperous pregnancy (presence of blood circulation pulsation), CRL = 9 mm corresponds to the 49th day of secondary amenorrhoea, CRL = 25 mm, to the 63rd day, and CRL = 55 mm, to the 84th day.
- The main goal of the follow up ultrasound examination is to exclude ongoing pregnancy, because in case the pregnancy continues, it is possible to proceed, depending on the actual gestational age and the patient’s wish, in the following way:
  - repetition of the pharmacological method – MToP (up until the 5th week of gestation, CRL ≤ 25 mm),
  - surgical method – abortion (up to the 12th week of gestation, CRL ≤ 55 mm),
- in case the patient decides to continue the pregnancy, it is necessary to inform the patient in detail about the potential risk of abnormal fetus development (approx. 1% of cases, damage to central nervous system and/or extremities has been reported), it is necessary to obtain the INFORMED CONSENT from the patient, it is recommended to make detailed fetal anomaly scan by ultrasound.

**Scheme 2:** Medical Termination of Pregnancy (MToP) up until the 7th week of gestation - evaluation of the result and management

**EVALUATION OF THE RESULT**

- "Ongoing pregnancy" - a medical abortion has failed, if the pregnancy continues
- "Incomplete abortion" - presence of a non-vital embryo/fetus in the uterine cavity, another abdominal ultrasound finding in the area of uterine cavity or cervical canal, and simultaneously presence of clinical symptoms; persistent value of human chorionic gonadotropin (hCG) in serum of more than 1000 IU/l (positive low sensitivity urine hCG test)
- "Complete abortion" - a medical abortion is successful when the expulsion has occurred without the need of any other observation (Expectant management) or additional treatment (misoprostol alone or Surgery)

**MANAGEMENT**

- "Ongoing pregnancy" - repetition of the pharmacological method – MToP (up until the 5th week of gestation, CRL ≤ 25 mm), surgical method – abortion (up to the 12nd week of gestation, CRL ≤ 55 mm), continuing the pregnancy – Prenatal care
- "Incomplete abortion" - Expectant management or additional misoprostol or Surgery