

# Indications leading to termination of singleton pregnancies

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# Background

- With the improvement of ultrasound technology, the likelihood of detection of major fetal structural anomalies has increased considerably.
- Upon the detection of serious anomalies by invasive diagnostic tests or ultrasound examination, pregnancy termination option should be offered to families in case of lack of fetal and neonatal treatment options.

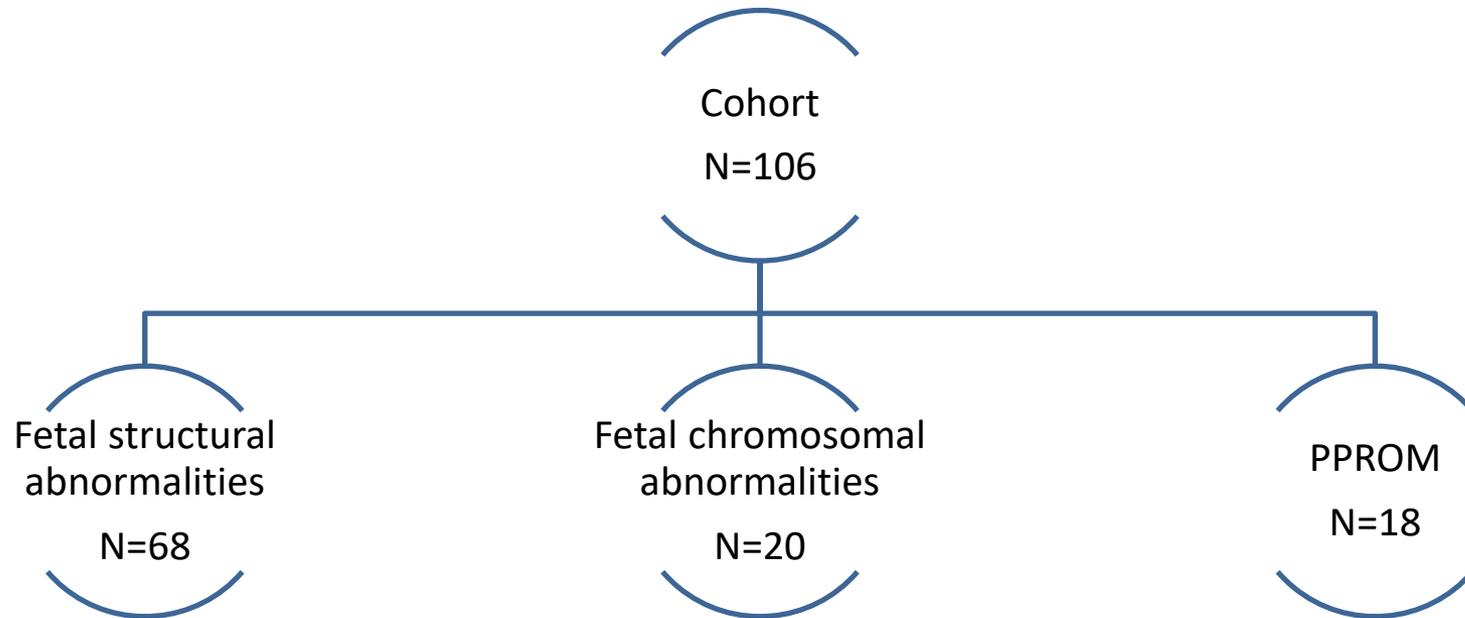
# Objective

- To evaluate the distribution of fetal indications leading to termination of singleton pregnancies in our institute between January, 2017 and March, 2019.

# Methods

- Multiple pregnancies were excluded from this study.
- Maternal demographic features; gestational age at the time of the TOP procedure, mode of termination, fetal weight and sex, karyotype results (if done) and feticide status (from 22 weeks' gestation onwards, pregnant women were asked to do feticide)
- Fetal abnormalities leading to TOP were assessed.

# Results



# Results

	Median (Range)	N	(%)
Maternal age (years)	27 (15-43)		
Gravidity	1 (1-7)		
Parity	1 (0-6)		
Gestational age at the time of TOP procedure (weeks)	21 (11-25)		
Feticide		30/106	28.3
Mode of termination (Hysterotomy/VD)		11/95	
Fetal weight (grams)	360 (20-1115)		
Fetal sex (F/M/?)		41 50 15	38.7 47.1 14.1

The system involved	Number of cases	Gestational ages at termination (weeks)
Central nervous system	38	20 (median)
Hydrocephaly	5	20,20,22,22,24
Neural tube defects	21	20 (median)
Acrania	4	11,12,13,13
Anencephaly	3	20,20,24
Holoprosencephaly	2	24,23
Agenesis of the corpus callosum	1	23
Dandy-Walker malformation	2	21,21
Urinary tract	8	
Renal agenesis, bilateral	4	18,20,22,23
Megacystis	3	14,17,22
Multicystic kidney disease	1	20
Cardiovascular system and lung	4	
Hypoplastic left heart	2	24,25
Truncus arteriosus	1	22
Lung hypoplasia	1	23
Musculo-skeletal System	4	20,21,22,24
Multiple anomalies	10	21.5 (median)
Other	4	
Hydrops	3	17,22,23
Sacroccygeal teratoma	1	21
<b>TOTAL</b>	<b>68</b>	<b>21 (median)</b>

# Results

Chromosomal-genetic abnormalities	N	(%)
Trisomy 21	11	10.3
Trisomy 18 & 13	5	4.7
Turner (45,XO)	2	1.9
Triploidy	1	0.9
Partial 12q duplication and partial Xp deletion	1	0.9
<b>Total</b>	<b>20</b>	<b>20/106 (18.8)</b>

# Discussion

- CNS malformations are the most common structural malformations in the TOPs in our institute(64.1%) consistent with the literature.
- Chromosomal abnormalities were detected in 20/106 (18.8%) of the cases and of them, trisomy 21 was the leading aneuploidy, diagnosed in 11 (10.3%) cases.

# Conclusion

- First and second trimester ultrasonographic examination seems to be the single and most important parameter for detection of fetal abnormalities.
- With more effective prenatal screening, some of the late pregnancy terminations can be reduced.



# MISOPROSTOL-ONLY RECOMMENDED REGIMENS 2017

<13 weeks' gestation	13–26 weeks' gestation	>26 weeks' gestation <sup>a</sup>	Postpartum use
<p><b>Pregnancy termination<sup>a,b,1</sup></b> 800µg sl every 3 hours or pv*/bucc every 3–12 hours (2–3 doses)</p>	<p><b>Pregnancy termination<sup>1,5,6</sup></b> 13–24 weeks: 400µg pv*/sl/bucc every 3 hours<sup>a*</sup> 25–26 weeks: 200µg pv*/sl/bucc every 4 hours<sup>f</sup></p>	<p><b>Pregnancy termination<sup>1,5,9</sup></b> 27–28 weeks: 200µg pv*/sl/bucc every 4 hours<sup>6,9</sup> &gt;28 weeks: 100µg pv*/sl/bucc every 6 hours</p>	<p><b>Postpartum hemorrhage (PPH) prophylaxis<sup>1,2,10</sup></b> 600µg po (x1) <b>or PPH secondary prevention<sup>1,11</sup></b> (approx. ≥350ml blood loss) 800µg sl (x1)</p>
<p><b>Missed abortion<sup>a,2</sup></b> 800µg pv* every 3 hours (x2) or 600µg sl every 3 hours (x2)</p>	<p><b>Fetal death<sup>4,5,6,6</sup></b> 200µg pv*/sl/bucc every 4–6 hours</p>	<p><b>Fetal death<sup>3,9</sup></b> 27–28 weeks: 100µg pv*/sl/bucc every 4 hours<sup>f</sup> &gt;28 weeks: 25µg pv* every 6 hours or 25µg po every 2 hours<sup>h</sup></p>	<p><b>PPH treatment<sup>3,2,10</sup></b> 800µg sl (x1)</p>
<p><b>Incomplete abortion<sup>a,2,3,4</sup></b> 600µg po (x1) or 400µg sl (x1) or 400–800µg pv* (x1)</p>	<p><b>Inevitable abortion<sup>a,2,3,5,6,7</sup></b> 200µg pv*/sl/bucc every 6 hours</p>	<p><b>Induction of labor<sup>3,2,9</sup></b> 25µg pv* every 6 hours or 25µg po every 2 hours</p>	
<p><b>Cervical preparation for surgical abortion<sup>d</sup></b> 400µg sl 1 hour before procedure or pv* 3 hours before procedure</p>	<p><b>Cervical preparation for surgical abortion<sup>a</sup></b> 13–19 weeks: 400µg pv 3–4 hours before procedure &gt;19 weeks: needs to be combined with other modalities</p>		

## References

- a WHO Clinical practice handbook for safe abortion, 2014
- b von Hertzen et al. Lancet, 2007; Sheldon et al. 2016 FIAPAC abstract
- c Gemzell-Danielsson et al. IJGO, 2007
- d Sääv et al. Human Reproduction, 2015; Kapp et al. Cochrane Database of Systematic Reviews, 2010
- e Dabash et al. IJGO, 2015
- f Perritt et al. Contraception, 2013
- g Mark et al. IJGO, 2015
- h WHO recommendations for induction of labour, 2011
- i FIGO Guidelines: Prevention of PPH with misoprostol, 2012
- j Raghavan et al. BJOG, 2015
- k FIGO Guidelines: Treatment of PPH with misoprostol, 2012

## Notes

- 1 If mifepristone is available (preferable), follow the regimen prescribed for mifepristone + misoprostol<sup>a</sup>
- 2 Included in the WHO Model List of Essential Medicines
- 3 For incomplete/inevitable abortion women should be treated based on their uterine size rather than last menstrual period (LMP) dating
- 4 Leave to take effect over 1–2 weeks unless excessive bleeding or infection
- 5 An additional dose can be offered if the placenta has not been expelled 30 minutes after fetal expulsion
- 6 Several studies limited dosing to 5 times; most women have complete expulsion before use of 5 doses, but other studies continued beyond 5 and achieved a higher total success rate with no safety issues
- 7 Including ruptured membranes where delivery indicated
- 8 Follow local protocol if previous cesarean or transmural uterine scar
- 9 If only 200µg tablets are available, smaller doses can be made by dissolving in water (see www.misoprostol.org)
- 10 Where oxytocin is not available or storage conditions are inadequate
- 11 Option for community based programs

## Route of Administration

**pv** – vaginal administration  
**sl** – sublingual (under the tongue)  
**po** – oral  
**bucc** – buccal (in the cheek)

<sup>a</sup> Avoid pv (vaginal route) if bleeding and/or signs of infection

Rectal route is not included as a recommended route because the pharmacokinetic profile is not associated with the best efficacy

# Multiple anomalies

- Hydrocephalus+severe aortic stenosis+single umbilical artery 1
- Hydrocephalus+skeletal dysplasia 1
- Megacystis+club foot+ventricular septal defect 1
- Gastrochisis+cystic hygroma+ventriculomegaly 1
- Central nervous system+polydactyly+club foot 1
- Omphalocele+cystic hygroma 1
- Urinary tract+cardiovascular system+skeletal 1
- Hydrocephalus+club foot 1
- Hypoplastic left heart+gastroschisis 1
- Hydrocephalus+bilateral polycystic kidneys 1

# Türkiye'de yasal durum

- 1983 tarihli 2827 sayılı Nüfus Planlaması Hakkında Kanun
- Gebelik süresi on haftadan fazla ise rahim ancak gebelik, annenin hayatını tehdit ettiği veya edeceği ya da doğacak çocuk ile onu takip edecek nesiller için ağır maluliyete neden olacağı hallerde kadın hastalıkları ve doğum uzmanı ve ilgili daldan bir uzmanın objektif bulgulara dayanan gerekçeli raporları ile tahliye edilebilmektedir.