



MATERNAL OUTCOME OF EARLY VERSUS LATE TERMINATION OF PREGNANCY AMONG PREGNANT MOTHERS WITH PRENATAL DIAGNOSIS OF LETHAL FETAL ANOMALIES: A RETROSPECTIVE REVIEW

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Introduction

- In England and Wales, late termination of pregnancy for fetal anomaly have remained constant at 124-137/year between 2002 and 2008.¹
- Risk of termination increase with gestational age, particularly with medical termination; complication rates (haemorrhage, uterine perforation and/or sepsis) increase from 5/1000 medical procedures at 10-12 weeks to 16/1000 at 20 weeks of gestation and over.¹
- Recent research has focused on the prenatal diagnosis of fetal abnormalities at an earlier gestation.^{1,2}

Objective

- To compare the maternal morbidities between early (21⁺⁶ weeks gestation and below) and late (22⁺⁰ weeks gestation and above) termination of pregnancy (TOP) among pregnant mothers with prenatal diagnosis of lethal fetal anomalies.

Methods

- This was a retrospective study reviewing all patients diagnosed prenatally to carry lethal fetal anomalies in Hospital Tengku Ampuan Afzan, Kuantan, Pahang, Malaysia during the year of 2011.
- Patient data was traced from the hospital record office.
- As World Health Organisation (WHO) uses 22 weeks gestation as threshold for defining stillbirths, thus we uses 22 weeks gestation as limit of gestational age for grouping of early and late TOP.
- The study samples were divided into 2 groups, i.e. early (21⁺⁶ weeks gestation and below) and late (22⁺⁰ weeks gestation and above) TOP groups.
- These TOPs were decided based on Section 312 of the Penal Code that a termination of pregnancy is permitted in circumstances where there is risk to the life of the pregnant woman or threat of injury to her physical or mental health.³
- The maternal morbidities and outcome of these 2 groups of patients were compared respectively.
- Data was analyzed by using SPSS version 18.0.

Results

- There were 25 patients diagnosed (via ultrasound with or without genetic study) to have lethal fetal anomalies. The types of anomalies are shown in Figure 1.

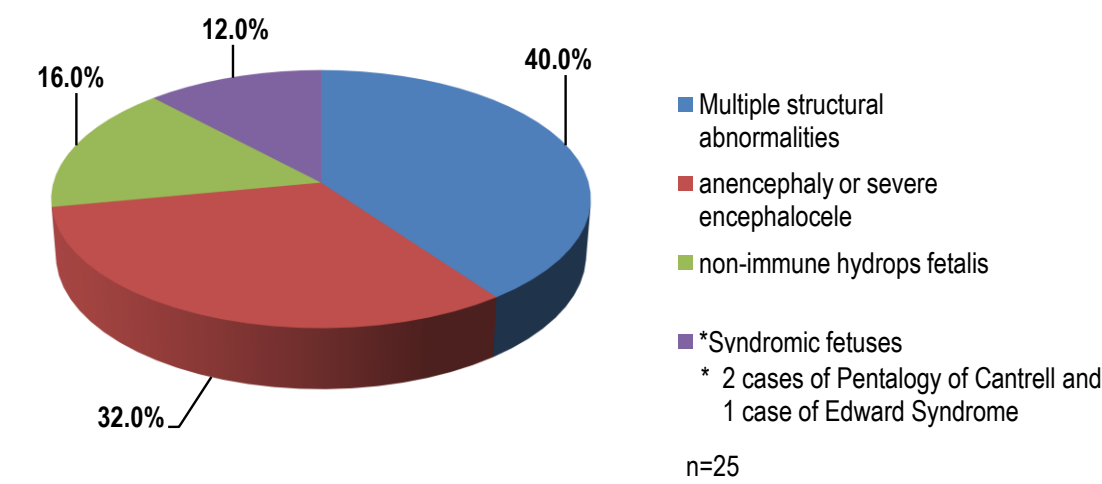


Figure 1. Types of lethal fetal anomalies among the study samples

- Seven (28.0%) and 18 (72.0%) patients had early and late TOP respectively. No maternal mortality occurred in these 2 groups. Table I presents demographic and clinical characteristics of the study samples.

Table I. Demographic characteristic of the study samples

Characteristics	Early TOP (n=7)	Late TOP (n=18)	P
Maternal age (years)	*29.3±6.0	*20.9±6.3	0.56
Gravidity	*2.6±1.5	*3.1±2.3	0.31
Parity	*1.7±1.5	*1.8±2.0	0.49
Race			
Malay	†4 (57.0)	†15 (83.3)	-
Chinese	†0 (0)	†0 (0)	-
Indian	†0 (0)	†0 (0)	-
Others	†1 (1.4)	†2 (11.1)	-
Foreigner	†2 (28.6)	†1 (5.6)	-
Antenatal profile			
Age > 35 years old	†1 (14.3)	†5 (27.8)	0.64
Diabetes Mellitus	†3 (42.9)	†3 (16.7)	0.30
Previous history of unexplained IUD	†0 (0)	†1 (5.6)	1.0
Previous pregnancy with fetal congenital anomaly	†0 (0)	†0 (0)	-
Previous scar	†1 (14.3)	†3 (16.7)	1.00
Grandmultipara	†0 (0)	†2 (11.1)	1.00
Gestational age at diagnosis of lethal fetal anomalies (weeks)	18.2±2.9	*29.7±6.0	<0.05
Gestational age at TOP or delivery (weeks)	19.5±2.5	*32.2±5.9	<0.05

*mean±SD †n (%)

- All patients with early TOP aborted vaginally (Table II). Among those with late TOP, 5 (27.8%) patients had complicated delivery, included 3 (16.7%) with assisted breech delivery and 2 (11.1%) with abdominal delivery (Figure 2). The abdominal deliveries were for transverse lie in labour and emergency hysterotomy for failed induction complicated by hysterectomy for ruptured uterus noted intraoperatively.

Table II. Mode of delivery between early and late TOP groups

Mode of Delivery	Early TOP (n=7)	Late TOP (n=18)	P
Vaginal route	7 (100%)	16 (88.9%)	0.51
Non-vaginal route	0 (0%)	2 (11.1%)	

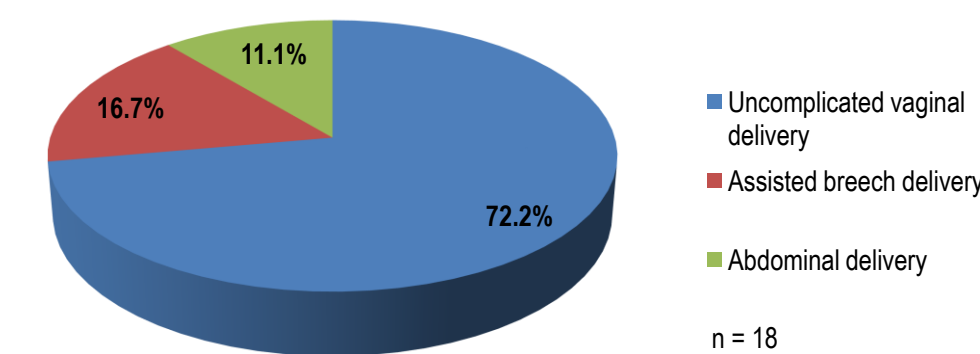


Figure 2. Mode of delivery among the late TOP patients

- Patients with late TOP were more prevalent to morbidities compared to early TOP arm (Figure 3). Those patients with symptomatic polyhydramnios required amnioreduction. Two patients developed gestational hypertension with 1 of them developed impending eclampsia requiring IV MgSO₄ infusion. However, there was higher prevalence of retained placenta in the group of early TOP with one of them developed endometritis following manual removal of retained placenta.

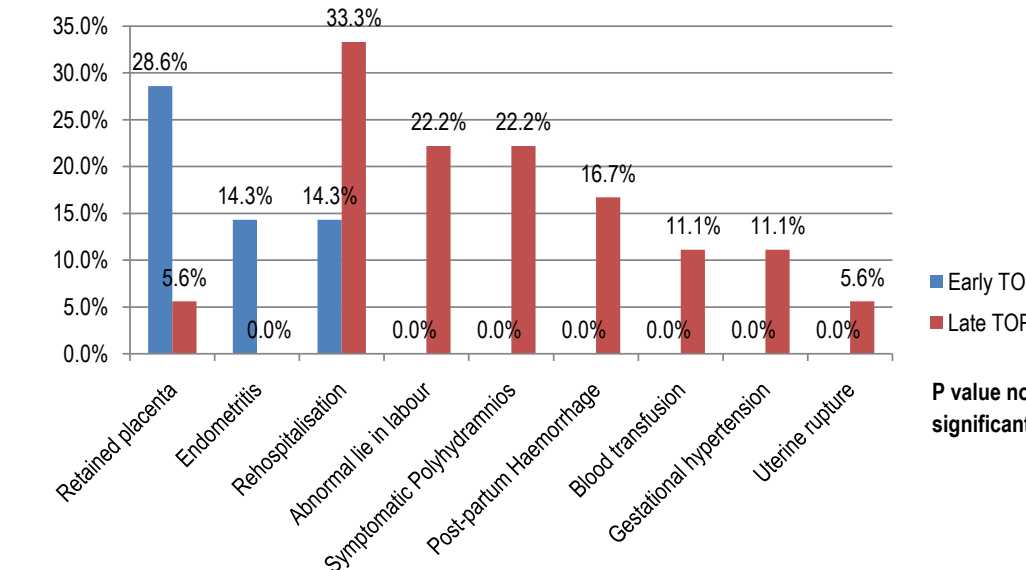


Figure 3. Comparison of associated morbidities between early and late TOP groups

- Patients with late TOP tended to have rehospitalisation and longer period of hospital stay, though statistically not significant (Table III).

Table III. Hospital stay between early and late TOP groups

Characteristics	Early TOP (n=7)	Late TOP (n=18)	P
Rehospitalisation	1 (14.3%)	6 (33.3%)	0.34
Total days of hospital stay (mean±SD)	5.7±2.8	6.9±4.1	0.47

Discussion

- According to one study in United States, the risk of death associated with childbirth was approximately 14 times higher than that with abortion.⁴ In this study, maternal mortality occurred in neither early nor late TOP groups. Nevertheless, higher morbidity rate among the late TOP patients may suggest delayed TOP carries increased pregnancy-associated risk.
- Risk of termination increases with advancing gestational age.¹ Many dangerous pregnancy-related complications such as pregnancy-induced hypertension and placental abnormalities manifest themselves in late pregnancy; early abortions avoid these hazards.⁴ Similarly, in this study, many pregnancy-related morbidities i.e. abnormal lie, polyhydramnios, post-partum haemorrhage, blood transfusion, gestational hypertension with impending eclampsia, uterine rupture and prolonged hospitalisation occurred mostly in the late TOP group.

Conclusion

- Patients with late TOP seem to have more morbidities compared to patients with early TOP though the sample size is too small to yield statistically significant result.
- It may suggest that early prenatal diagnosis and TOP are essential to minimize the maternal morbidities and improve the outcome.
- More data need to be recruited to prove this conclusion.

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