

ABSTRACT

Introduction

The purpose of this study is to compare the incidence of delivery complications in pregnancies with neonatal palliative care plans at early versus late gestational ages.

Methods

A retrospective cohort study was performed at a single center from 2008 to 2015. Patients with lethal fetal diagnoses between 24 and 42 weeks gestational age and a neonatal palliative care plan were identified. Two cohorts were compared based on gestational age: 24-32 weeks and 32-42 weeks. The primary outcome was identified as the composite outcome of retained placenta, operative intervention, blood transfusion and maternal fever. Other maternal variables collected included: maternal age, weight, gravidity, parity, and the method of delivery. Continuous variables were compared using non-parametric Mann Whitney exact test; categorical variables were compared with a Fisher exact test or chi square.

Results

Sixty-seven patients with lethal fetal diagnoses delivered with a palliative care plan between 24 and 42 weeks gestational age, 44 patients from 24 to 31 6/7 weeks and 23 patients from 32 to 42 weeks. There were 6 complications in early gestations (13.6%) and 2 in later gestations (9.6%), (P=.705). There was no significant difference in maternal demographics between the groups. There was a significant decrease in complications with increasing gravidity (P=0.01) and parity (P=.001) and an increase in complications with increasing maternal age (P=.091).

Conclusion/Implications

More complications occurred in the earlier gestational age group, though this did not reach statistical significance. Complications occurred less often with increasing gravidity and more often with increasing maternal age.

BACKGROUND

- One in every 33 babies delivered in the US each year has a birth defect.
- The leading cause (20%) of infant mortality in US is congenital malformations and chromosomal abnormalities.
- Up to 90% of diagnoses are made in first or second trimester.
- Typically, patients have the option to continue the pregnancy until term or terminate immediately.
- No studies have yet been conducted on a third option, having an induction at any point in gestation that the psychological weight is too great.

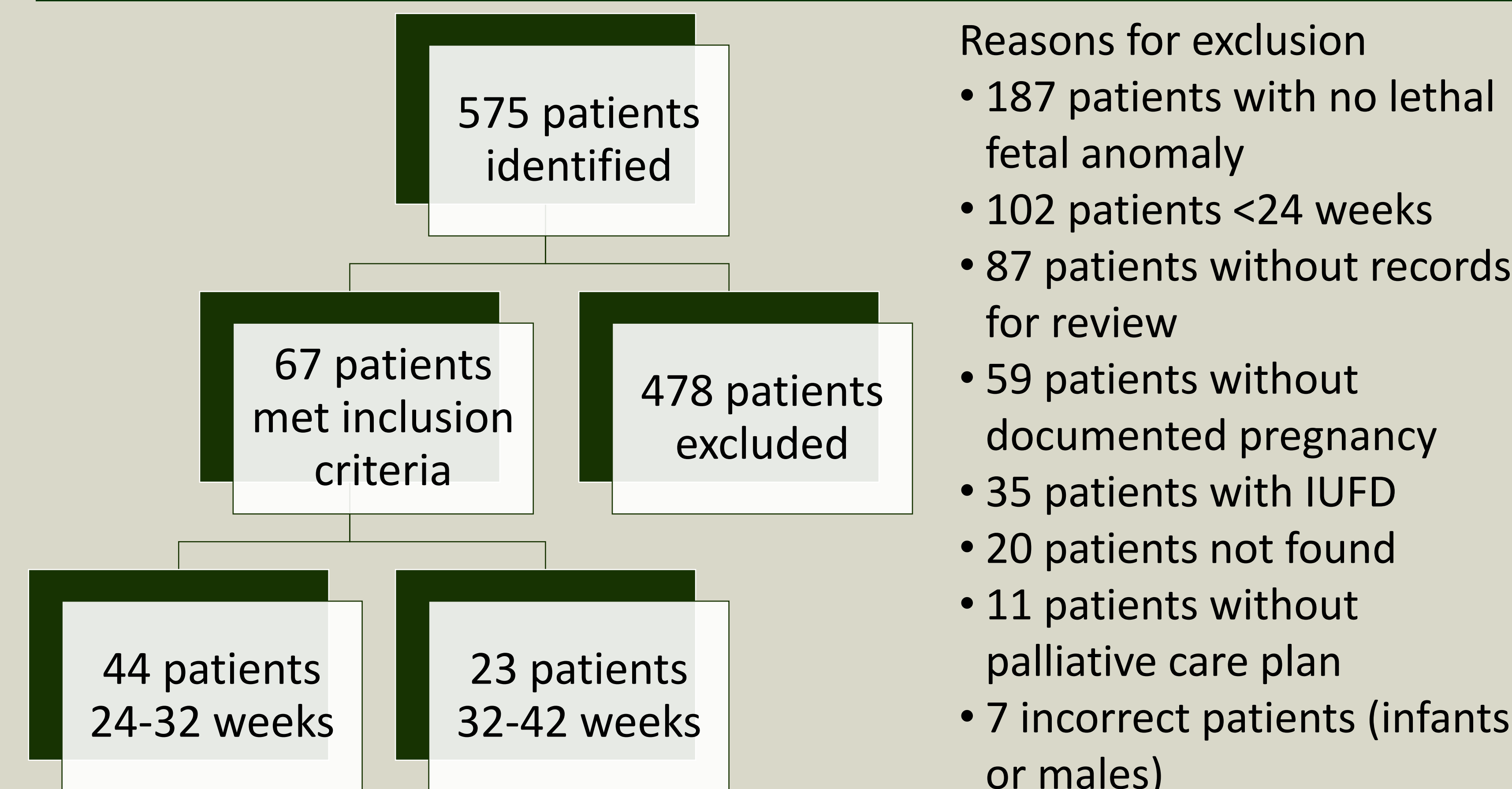
OBJECTIVE

Compare the incidence of delivery complications in pregnancies with neonatal palliative care plans due to lethal fetal diagnoses at 24 to 32 weeks vs 32 to 42 weeks gestational age.

STUDY DESIGN

- A retrospective cohort study was performed at a single fetal center from 2008 to 2015.
 - Inclusion criteria: lethal fetal diagnosis, delivery between 24 and 42 weeks gestation, palliative care plan was chosen for their neonate at time of admission
- Primary, composite outcome: retained placenta, operative intervention, blood transfusion and maternal fever
- Continuous variables were compared using non-parametric Mann Whitney exact test.
- Categorical variables were compared with a Fisher exact test or chi square.
- Regression trees were used to explore inter-related effects of variables.

RESULTS



GROUP DEMOGRAPHICS

	24-31 6/7 weeks (n=44)	32-42 weeks (n=23)	p-value
Maternal age	17-46 (28.4)	18-41 (28.7)	0.857
Maternal weight	29-124 (79.8)	28-102 (78.6)	0.892
Total pregnancies	1-6 (2.5)	1-6 (2.7)	0.610
Previous deliveries	0-5 (0.9)	0.5 (1.2)	0.364

RESULTS

COMPOSITE OUTCOME

	Operative Intervention	Retained Placenta	Blood Transfusion	Fever/Infection	Total
24-31 6/7 weeks	0	4	0	2	6
32-42 weeks	0	1	0	1	2
Total	0	5	0	3	8

DEMOGRAPHICS BY OUTCOME

	No complications (n=59)	Complication (n=8)	p-value
Maternal age	17-46 (28.1)	22-39 (31.9)	0.091
Maternal weight	29-124 (78.3)	85-92 (78.6)	0.147
Total pregnancies	1-6 (2.7)	1-3 (1.5)	0.010
Previous deliveries	0-5 (1.1)	0-1 (0.4)	0.001

- There were no statistically significant differences in demographics between the two groups.
- A total of eight complications were observed in the study groups, six at earlier gestational ages and two at later gestational ages.
- While there was an increase in complications at early gestational ages, this finding did not reach statistical significance.
- Complications occurred less often with increasing gravidity and more often with increasing maternal age.
- None of the patients in the study required an unscheduled cesarean delivery.

CONCLUSION

- More complications occurred in the earlier gestational age group, though this finding did not reach statistical significance.
- Complications occurred less often with increasing gravidity and more often with increasing maternal age.
- Though further research needs to be done, it is reasonable to offer patients the autonomy of delivery at a gestation of their choice to reduce the immense stress associated with lethal diagnosis.