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Mid-Trimester Losses in Dichorionic Twin Pregnancies

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Introduction:

- There is a paucity of evidence on mid-trimester pregnancy losses (MTL) in dichorionic twins (DC).
- These losses are often underreported and overshadowed by increased rates of MTL seen in monochorionic twins (MC) as a consequence of placental sharing.
- DC pregnancies represent 70% of twins and shoulder a significant burden of perinatal morbidity and mortality.
- Twin pregnancies account of 20% of all PTB's

This review aims to provide an overview of the current evidence on MTL rates in DC twins, discuss limitations of this evidence and provide suggestions for improving outcomes.

Method:

- We performed a literature review on studies published after 2003 on pregnancy loss in DC twins between 12-24 weeks gestation.
- Additionally, we retrospectively reviewed pregnancy outcomes of DC twin pregnancies booked at the Liverpool Women's Hospital (LWH) between 2010-2019.

Results:

- 6 key studies identified within the literature providing data on MTL in DC pregnancies
- 1100 DC pregnancies identified through delivery summaries at LWH with 14 delivering between 16+0 and 23+6 weeks gestation – equating to a **1.3%** MTL rate

Gestation at Delivery	N =14
16-19+6	1
20-23+6	13

Table 1. MTL losses on DC twins by gestation at LWH

Onset of Delivery	N =14
Spontaneous:	
• PPROM	2
• Preterm Labour	10
Induction of labour:	
• Maternal indication	1
• IUD	1

Table 2. MTL by onset of delivery at LWH

Discussion:

For LWH data:

- Only 1 delivery < 20 weeks, potential underestimation
- Majority of losses as a result of PPROM/PTL
- In keeping with findings from Lee et al

Literature review:

- Heterogenous data
- Inconsistent terminology, lack of definitions, different gestational cut offs used
- Discrepancy in reported results
- Current emphasis on MC twins within the literature

Study	<24 week loss rates
Carroll 2005 (1)	
• Pregnancy Loss	0/92 (0%)
Sperling 2006 (2)	
• Spontaneous miscarriage	6/421 (1.4%)
• Fetal loss	22/842 (2.6%)
Lee 2010 (6)	
• Pregnancy Loss	86/2058 (4.2%)
• IUD	4/2058 (0.2%)
• PPROM/PTL	77/2058 (3.74)
Oldenburg 2012 (3)	
• Fetal loss	34/1757 (1.9%)
D'Antonio 2013 (4)	
• Fetal loss	33/5024 (0.7%)
Litwinska 2019 (5)	
• Fetal loss	230/9792 (2.3%)

Table 3: Summary of literature review

Conclusion:

- We currently do not know the true rate of MTL in DC pregnancies, it is likely underreported.
- As a result it is difficult to understand the aetiology of these pregnancy losses.
- Good quality, prospective data collection is needed.
- Our data, along with Lee et al suggest that PTB/PPROM contribute significantly to MTL in DC pregnancies
- If so, should we not consider screening and intervention in DC pregnancies

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