

Antenatal management of very preterm birth at a tertiary maternity hospital: an audit of compliance with state guidelines

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Background

Evidence-based recommendations for management of women at risk of birthing very preterm include administration of corticosteroids, magnesium sulphate and antibiotics¹. We assessed compliance with state guidelines for management of women birthing very preterm at a tertiary maternity hospital.

Method

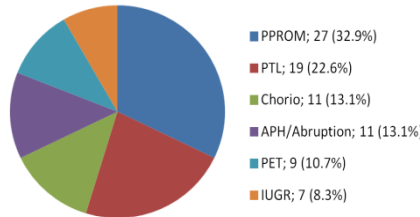
Retrospective audit of women delivering a very preterm at a tertiary maternity hospital from 1st January 2016 to 31st December 2017. All deliveries considered viable and less than 28 weeks included. Any known IUFDS excluded. Cases identified using the birth registry database; 84 in total. Data collected by review of medical records. Ethics approval given by hospital's human research ethics committee.

Results

Figure 1. Baseline characteristics

Maternal age (ave)	30.45 years
BMI (ave)	27kg/m ²
Nulliparous (N (%))	42 (50%)
Ethnicity (N (%))	
-Caucasian	51 (60.71%)
-Asian	12 (14.29%)
-ATSI	5 (5.95%)
-Indian/Pakistani/Sri Lankan	10 (11.90%)
-Other	6 (7.14%)
Multiple pregnancies (N (%))	11 (13.1%)
-Twin	9 (10.7%)
-Triplet	2 (2.4%)
History of preterm birth (N (%))	14 (16.67%)
Diagnosed short cervix (N (%))	13 (15.48%)
Gestational age at delivery (weeks+)	25+6.73

Figure 2. Primary reason for preterm delivery



Figures 3 & 4. Treatment received

	Complete	Incomplete	None
Steroids	59 (70.2%)	22 (26.2%)	3 (3.6%)
MgSO ₄	30 (35.7%)	31 (36.9%)	23 (27.4%)
Antibiotics (where indicated)	36 (57.1%)	17 (27%)	10 (15.9%)

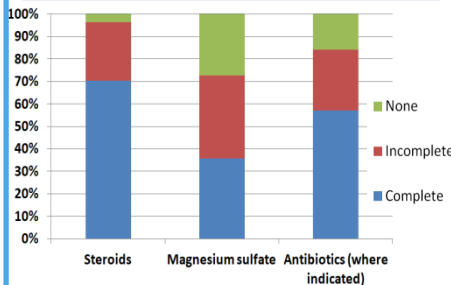


Figure 4. Reasons cited for lack of treatment (where no or incomplete treatment was given)

Reason	Steroids	Magnesium Sulfate	Antibiotics
Rapid progression of labour	13 (52%)	22 (40.7%)	20 (74.1%)
Urgent delivery for maternal indication	3 (12%)	10 (18.5%)	1 (3.7%)
Urgent delivery for foetal indication	4 (16%)	16 (29.6%)	6 (22.2%)
Other/unknown	5 (20%)	6 (11.1%)	0 (0%)

Conclusion

Compliance with treatment guidelines is greatest for corticosteroids. Room for improvement exists with magnesium sulfate and antibiotics. Most common reason for incomplete/no treatment is rapid progression of labour. This suggests treatment compliance may be improved with better prediction of timing of delivery. Further study could include examining use of risk prediction tools such as cervical length measurement and foetal fibronectin testing to see if use of these tools improves provision of timely treatment.

References

- SA Health, South Australia, Australia. South Australian Perinatal Practice Guideline on Preterm Labour. [Internet, last updated Sept 2015, last viewed 17th Aug 2018]. Available from: <https://www.sahealth.sa.gov.au/wps/wcm/connect/public-content/sa+health+internet/clinical+resources/clinical+topics/perinatal+Crowthor+CA,+McKinlay+CJD,+Middleton+P,+Harding+JE.+Repeat+cases+of+prenatal+corticosteroids+for+women+at+risk+of+preterm+birth+for+improving+neonatal+health+outcomes.+Cochrane+Database+of+Systematic+Reviews+2015,+Issue+7.+Art.+No.:+CD003935.+DOI:+10.1002/14651858.CD003935.pub4>
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