An audit of prescribing and administration of oxytocin variable rate infusion in obstetrics

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Problem: Oxytocin is the most commonly used medication for labour induction in modern obstetric practice to increase uterine activity[1]. Interventions with oxytocin may have potential adverse effects on the mother and foetus, such as; uterine tachysystole combined with abnormal foetal heart rate and in extreme cases foetal distress, asphyxia and death[2]. In the past, two serious incidents have occurred in the trust whereby a wrong infusion was administered and during the investigation it was highlighted that the prescribing and administration of oxytocin are not standardised[3]. The aim is to assess the current documentation practice for prescribing and administration of oxytocin variable rate infusion on the labour ward.

Methodology: The sample size was determined by accessing patient paper notes from the archive and following up on electronic system over a 2-week period[4]. Patients included were those pregnant and started on oxytocin variable rate infusion for augmentation of labour. Any prescriptions that were not administered and alternative prescriptions such as oxytocin intramuscular injections were omitted for the purpose of this audit.

Findings: 42 patients who received oxytocin variable rate infusion were considered for data analysis. The results demonstrate that all women who received an oxytocin variable rate infusion were prescribed as indicated according to local guidelines for augmentation of labour as shown in Figure 1. The audit highlighted a poor adherence to Standard 4 with 0% compliance (n=0) in prescribing the rate (ml/hr) on the initial prescription. Small sample size has introduced a margin error of 95±10%, this highlights a need to acquire more data for future projects.

Conclusion: The audit results highlight a need for standardising the local policy for the augmentation of labour to provide specific prescribing and administration advice. Improvement in prescribing the rate of infusion (ml/hr) prior to initiating infusion is identified as good practice.

Description of standard	Number of patients' adherent to the standards (n)	Target compliance (%)	Achieved compliance (%)
Standard 1: 100% of women were prescribed oxytocin variable rate infusion as per local guidelines for augmentation of Labour.	42	100%	100%
Standard 2: 100% of women were prescribed oxytocin infusion on paper (parental fluid therapy proforma).	41	100%	97.6%
Standard 3: 100% of women have a management plan documented in paper notes and/or BadgerNet prior to commencing oxytocin infusion.	41	100%	97.6%
Standard 4: 100% of women have an initiation dose and rate of infusion (ml/hr) prescribed on the proforma.	41 (dose)	100%	97.6%
	0 (rate)	100%	0%
Standard 5: 100% of women have changes in rate of oxytocin infusion documented in paper notes and/or BadgerNet.	42	100%	100%
Standard 6: 100% of oxytocin infusions were signed by two midwives upon administration as per the injectable medicines SOP.	4	100%	9.5%
Standard 7: 100% of women have a documented reason for discontinuation of oxytocin, excluding caesarean section (C/S) or labour e.g. hyper stimulation.	42	100%	100%
Standard 8: 0% of women received rate > 9ml/hr without documented discussion with senior SpR/ Obstetrician.	42	0%	0%

Notes:
Thresholds of compliance key:
Full compliance 90% ≥ x ≥ 100%
Partial compliance 70%≤ x ≤85%
Minimal compliance x < 65%

Figure 1: Audit standards with target and achieved compliance

Biography

Komal is a specialist pharmacist at King's College Hospital in London. Her post graduate training includes a diploma in general pharmacy practice completed at the University College London in 2021. She is an extremely passionate pharmacist with extensive scientific knowledge of conversant clinical trends in medicine. She is dedicated to provide quality patient-centric care with highest standards and most innovative outcomes. She is committed to pursue professional goals by exercising personal values and collaborative working. Her research interests include topics in women's and children's and rare diseases such as Wilson's and Primary Biliary Cholangitis.

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