

A review of potential risk factors in pregnant and postpartum patients admitted to a general intensive care unit

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Introduction

There is growing national interest in the care of pregnant and postpartum patients requiring critical care.¹ We aimed to review potential risk factors in obstetric patients admitted to ICU at Glasgow Royal Infirmary (GRI).

Methods

The ICU computer systems were interrogated for pregnant or postpartum patients admitted between January 2007 and August 2013. Subsequently both computer and paper records were searched to find potential risk factors.

Results

46 patients were identified representing 1.1% of the total number of general critical care admissions and 1.1 critical care admissions per thousand maternities in this hospital. Paper notes were not available for four patients who were excluded from further analysis. The table contains the findings from this cohort and comparators both from the local ITU population and nationally available data.

Discussion

This data comes from a small cohort but identifies potential trends in risk factors. Smoking, alcohol excess and drug abuse appear to be less common in obstetric admissions than other admissions to ICU. Rates of drug abuse and smoking may be higher in critically ill obstetric patients compared to their healthy pregnant and post-partum counterparts. There is no reliable comparator for alcohol abuse currently. The rates of obstetric patients with high BMI in critical care seem similar to the national rate in women of child-bearing age, but there is a trend towards patients with low BMI being at higher risk of ICU admission during their maternity. This is likely multifactorial but warrants further attention.

	GRI ICU Obstetric Patients	GRI ICU General Patients	Scottish National Rates
Smoking (current)	31%	56% ²	19.3% ⁴ (smoking in maternities)
Alcohol Excess (current)	2.4%	35.7% ³	
Illicit Drug Abuse (past or present)	7.2%	14% ²	0.89% ⁵ (drug abuse in maternities)
BMI <18.5	14.3%		1.2-4.2% ⁶ (non-pregnant 16-44yo)
BMI ≥30	21.4%	9.5% ²	11.3-32.3% ⁶ (non-pregnant 16-44yo)

References

- 1 Maternal Critical Care Working Group. Providing equity of critical and maternity care for the critically ill pregnant or recently pregnant woman. RCOG. July 2011
- 2 Docking R, Mackay A, Williams C, Lewsey J, Kinsella J, Booth M. Comorbidity and Intensive Care Outcome- A multivariate Analysis. (Accepted for publication in JICS 2014).
- 3 O'Kane M, MacKay A, Docking R, Cook B, Booth M. A tale of two cities: Comorbidity in Edinburgh and Glasgow. (Abstract)
- 4 Scottish Tobacco Control Alliance. Tackling smoking in pregnancy in Scotland: a policy summit. ASH Scotland. December 2012.
- 5 Information Services Division. Drug misuse statistics Scotland: 2009. NHS Scotland 2010
- 6 The Scottish Government. Scottish Health Survey 2012.