



SEVERITY OF ANEMIA AND ITS OBSTETRIC IMPLICATIONS



MINISTRY OF HEALTH
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INTRODUCTION

Anemia is the most common medical disorder complicating a pregnancy. Although the implications are significant, it remains highly prevalent, especially in developing countries.

The objective of this study is to identify the Obstetric implications of various severities of anemia. This will aid in identifying therapeutic targets of treatment and in risk stratification of patients.

METHODS

This is a retrospective cohort study. The study period was from 1st January 2010 till 31st December 2012 and 119,189 pregnant mothers with anemia were included in this study.

Specific variables were extracted from the National Obstetric Registry of Malaysia (NOR) from all the participating hospitals, which totalled to 399,274 patients.

RESULTS

31.5 % of pregnant mothers were anemic on booking in Malaysia. The incidence of Thalasaemia was 1%.

Severity of Anemia (g/dl)	Severity of prematurity											
	Below 32 weeks				Below 28 weeks							
	Yes		No		Yes		No					
N	%	N	%	OD (95% CI)	P value	N	%	N	%	OD (95% CI)	P value	
<6.5	15	0.20	321	0.12	1.90 (1.13, 3.20)	<0.001	5	0.14	331	0.12	1.27 (0.53, 3.08)	<0.001
6.5-7.9	58	0.79	1,343	0.49	1.76 (1.35, 2.29)		32	0.88	1,369	0.50	1.97 (1.38, 2.80)	
8.0-9.4	414	5.62	8,719	3.20	1.93 (1.74, 2.14)		180	4.93	8,953	3.24	1.69 (1.45, 1.97)	
9.5-11	2,177	29.53	70,552	25.88	1.26 (1.19, 1.32)		1,132	30.99	71,597	25.91	1.33 (1.24, 1.43)	
>11.1	4,707	63.86	191,679	70.31	1.00 (ref.)		2,304	63.07	194,082	70.24	1.00 (ref.)	

Table 1: Severity of anemia and prematurity

OD: Odds Ratio CI: Confidence Interval ; P value is based on simple logistics regression

Severity of Anemia (g/dl)	Hypertensive Diseases in Pregnancy														
	Gestational Hypertension				Pre-eclampsic toxicaemia (PET)										
	Yes		No		OD (95% CI)		P value		Yes		No		OD (95% CI)		P value
N	%	N	%					N	%	N	%				
<6.5	13	0.16	7	0.25	0.61 (0.24, 1.54)	<0.001		6	0.23	14	0.17	1.38 (0.53, 3.61)	0.001		
6.5-7.9	26	0.32	16	0.57	0.54 (0.29, 1.00)			13	0.49	29	0.35	1.45 (0.75, 2.79)			
8.0-9.4	199	2.47	88	3.13	0.75 (0.58, 0.97)			78	2.94	209	2.54	1.21 (0.92, 1.57)			
9.5-11	1,600	19.87	648	23.01	0.82 (0.74, 0.91)			598	22.56	1,650	20.08	1.17 (1.05, 1.30)			
>11.1	6,216	77.18	2,057	73.05	1.00 (ref.)			1,956	73.78	6,317	76.86	1.00 (ref.)			

Table 2: Severity of anemia and hypertensive diseases in pregnancy

OD: Odds Ratio CI: Confidence Interval ; P value is based on simple logistics regression

There is no significant association between anemia of various severity with the risk of post partum haemorrhage, caesarean section, dysfunctional labour, intra-uterine growth restriction, asphyxia and stillbirths.

CONCLUSIONS

Anemia is highly prevalent in Malaysia. There is an urgent need for more proactive intervention in terms of prevention and treatment. This should be a National Policy with written guidelines for health care givers.

Booking haemoglobin is an essential predictor of adverse Obstetric outcomes. Anemia has a significant association with for preterm delivery and pre-eclampsia. Anemia is not an independent risk factor for PPH, dysfunctional labour, caesarean section, IUGR and stillbirths.

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