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INTRODUCTION

Umbilical cord prolapse (UCP) is a rare obstetrical emergency that occurs when the umbilical cord descends alongside or beyond the fetal presenting part. It is life threatening to the fetus since blood flow through the umbilical vessels is usually compromised from compression of the cord between the fetus and the uterus, cervix or pelvic inlet.

OBJECTIVES

Objective of this paper is to evaluate the incidence, associated risk factors and perinatal outcome of umbilical cord prolapse in this country. The incidence of umbilical cord prolapse reported in the literature occurs in between 0.1 to 0.6 percent of deliveries and has remained constant over the years despite of changes in obstetrics practice. (RCOG Green top Guideline no 50).

METHODOLOGY

This is a retrospective review based on data from the National Obstetrics Registry from 1st January 2011 to 31st December 2012. A total of 260,959 deliveries were analyzed and in this study there were 473 cases of umbilical cord prolapse that was reviewed.

RESULT

A total of 14 tertiary hospitals participating in the study .473 cases of umbilical cord prolapse were reviewed giving the incidence of 0.2%. Interesting to note that the highest incidence of cord prolapse was Hospital Raja Permaisuri Bainun Ipoh with the rate of 0.4% followed by Hospital Sultanah Aminah Johor Bharu with the rate of 0.3%. In other hospitals the rate was 0.1% to 0.2%.

The commonest cause for cord prolapse was artificial rupture of membrane (ARM) followed by spontaneous rupture of membrane (SRM) with the rate of 51.9% and 38.8% respectively. Interestingly we observed that PPROM carries the lowest risk of umbilical cord prolapse with the rate of 2.9%. We also observed that multiple pregnancy was also a risk for cord prolapse (Table 2). UCP with breech presentation was at 0.3% and abnormal lie particularly transverse lie with the rate of 0.7%.

Table 1 Numbers of deliveries and Umbilical Cord Prolapse in participating institutions

Participating Institutions	Total deliveries	Cord prolapse	%
Hospital Sultanah Aminah	25107	85	0.3
Hospital Sultanah Bahiyah	20921	40	0.2
Hospital Raja Perempuan Zainab II	24316	36	0.1
Hospital Melaka	21816	34	0.2
Hospital Tuanku Jaafar	11159	19	0.2
Hospital Tengku Ampuan Afzan	18254	26	0.1
Hospital Raja Permaisuri Bainun	10923	40	0.4
Hospital Tuanku Fauziah	8073	12	0.1
Hospital Pulau Pinang	6429	11	0.2
Hospital Likas	28820	17	0.1
Hospital Umum Sarawak	11463	24	0.2
Hospital Tengku Ampuan Rahimah	24689	48	0.2
Hospital Sultanah Nur Zahirah	25126	40	0.2
Hospital Kuala Lumpur	23863	41	0.2
Total	260959	473	0.2

Table 2: Cord prolapse according to numbers of fetus

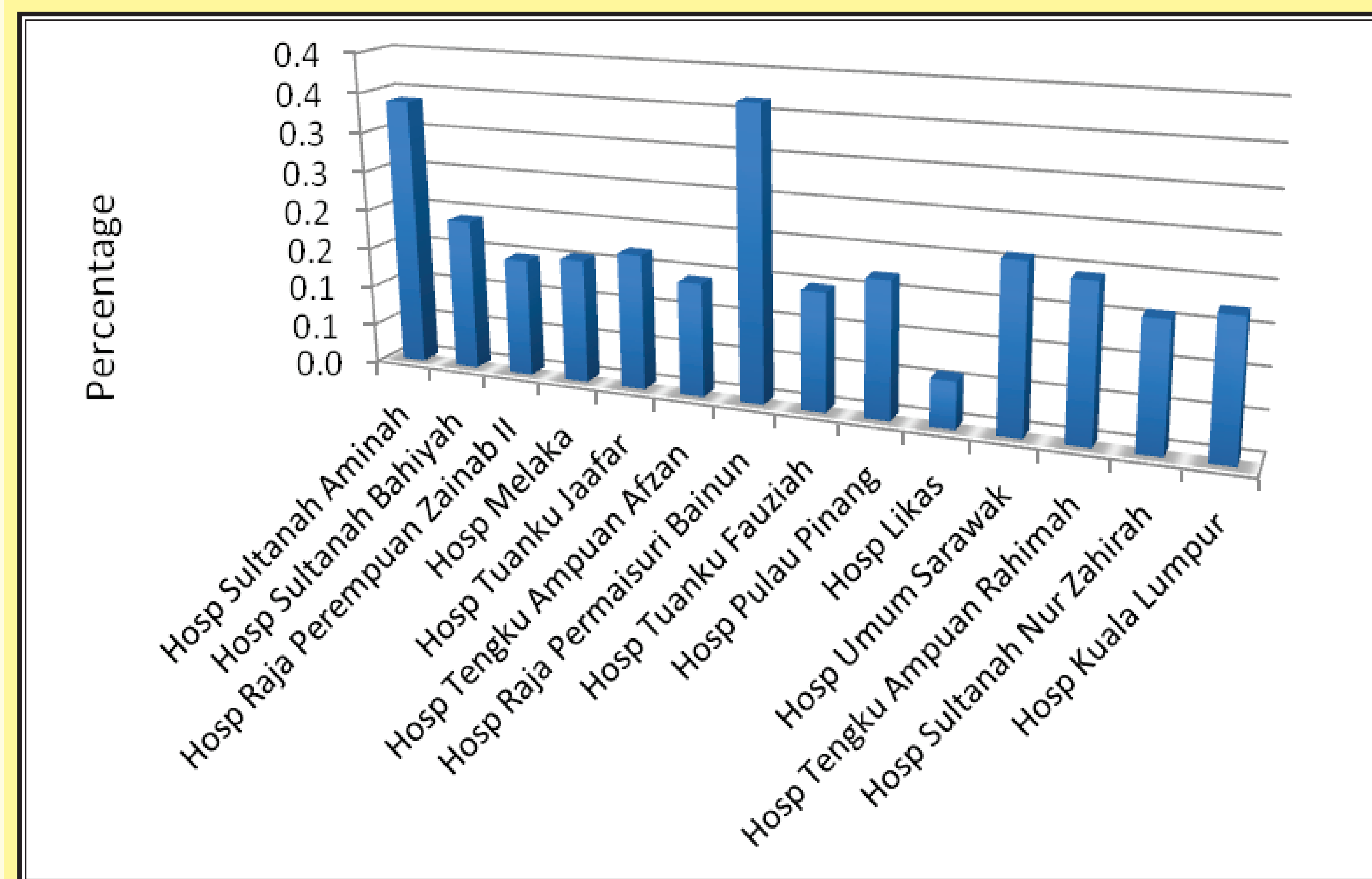
Type of pregnancy	Total deliveries	N	%
Singleton	255680	449	0.2
Twins	5048	24	0.5
Triplets	183	0	0
Total	260,959	473	0.2

Table 3: Mode of delivery and perinatal outcome

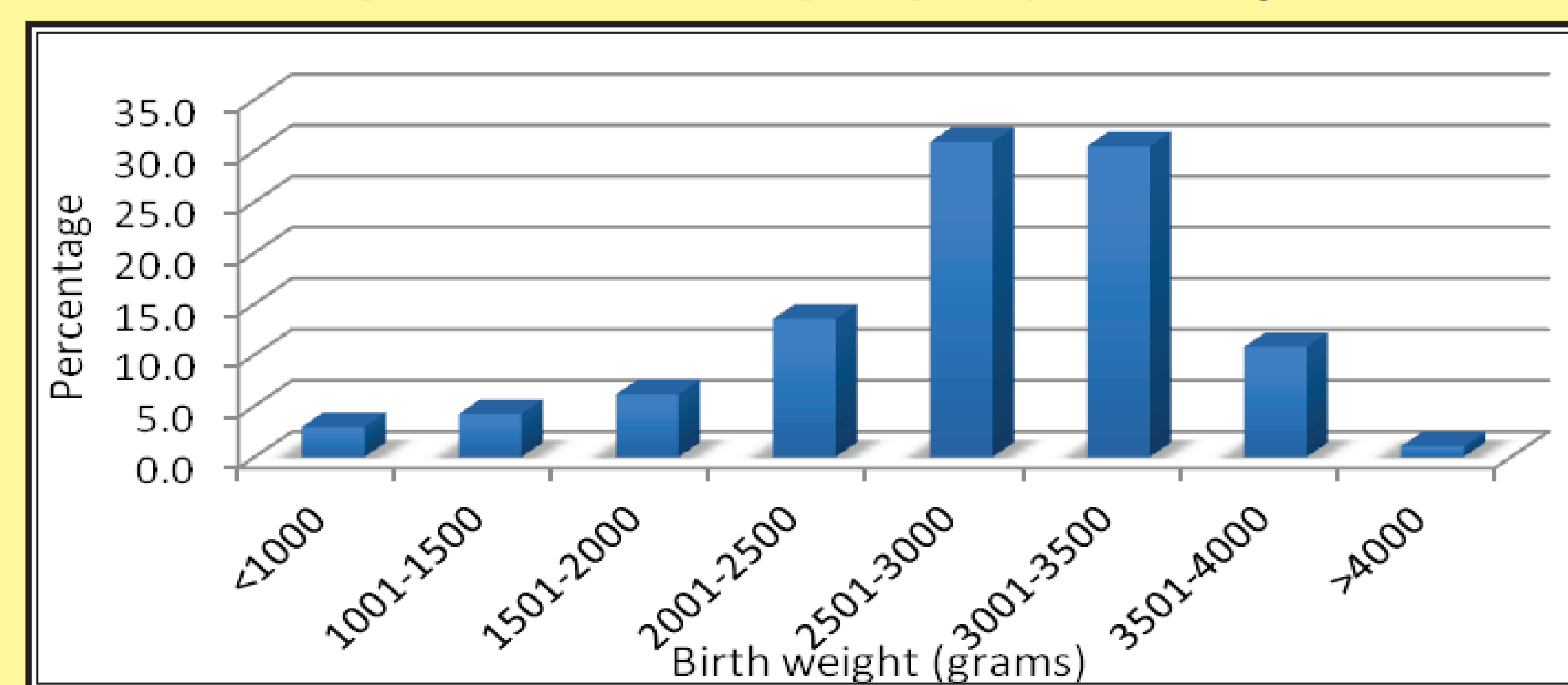
Mode of delivery	Live birth		Stillbirth	
	N	%	N	%
Vaginal delivery	14	3.1	5	33.3
Instrumental delivery	5	1.1	0	0.0
Caesarean Section	438	95.8	10	66.7
Total	457	100	15	100.0

Out of 457 cases of UCP, the 3.3% were stillborn. 98.5% of live births were delivered via Caesarean Section and 91.2% of cases had Apgar score >7 at 5 minutes. However due to incomplete data we are unable to ascertain whether the survivor was among the term or preterm babies. Majority of cord prolapse babies weighted between 2500 and 3500 gms. Only 3% had weight below 1000gms (Graph 2).

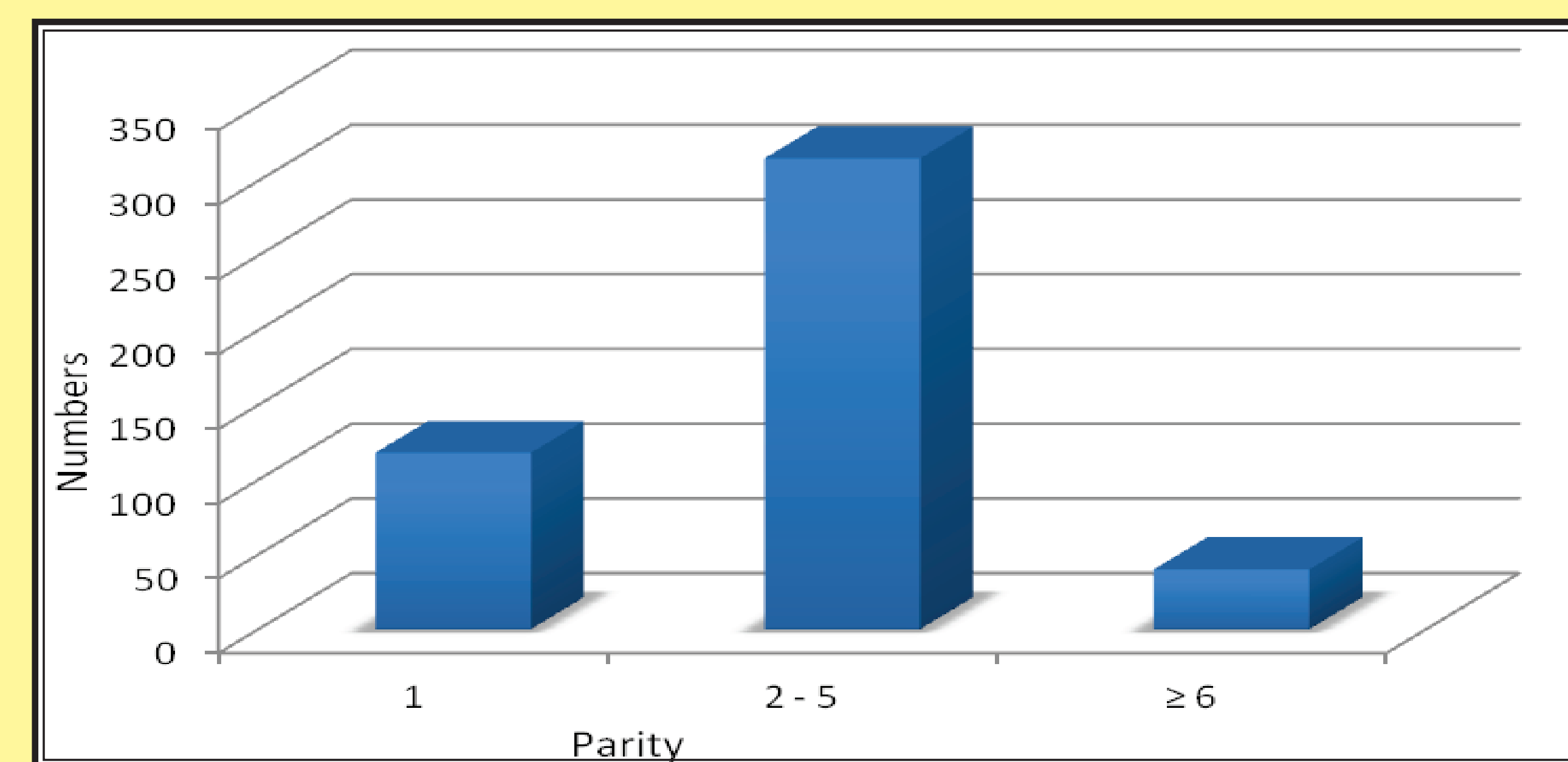
Graph 1: Incidence of cord prolapse



Graph 2: Umbilical cord prolapse by birth weight



Graph 3: Cord prolapse by parity



66.6% of cord prolapse occurred at parity 2 – 5 (Graph3)

CONCLUSION

The incidence remains constant over the years as reported in the literature and is similar to the current study. Among the identifiable risk factors included amniotomy, breech presentation, multiple pregnancy and abnormal lie. ARM still carries a higher risk for cord prolapse followed by SRM and PROM. More than 90% of babies in this study was not asphyxiated.

REFERENCES

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