Original Article

Maternal Outcomes and Factors Associated with Different Methods of Induction of Labour at the University Teaching Hospital - Lusaka, Zambia

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ABSTRACT

***Objectives**:* To determine maternal outcomes and factors associated with different methods of induction of labour, prevalence of and induction to delivery time at the Women and Newborn Hospital of the University Teaching Hospitals in Lusaka, Zambia.

***Methods**:* A cross sectional study design was used with 147 women who met inclusion criteria recruited in the study. Convenience sampling was used to recruite study participants using an investigator admnistered data collection tool. Data analysis was stratified by method of induction of labour. Logistic regression was used to determine association between method of induction and maternal outcome. Association between sociodemographic variables and maternal outcomes were analysed using crude odds ratios to determine statistical significance. Simple logistic regression was then used to further analyse associations with p – values of less than< 0.05

Results: Results showed that in the majority of patients, labour was induced using misoprostol 122 (77.7%) in which most of whom 90 (83%) the vaginal route was used (73.8%) followed by the intracervical balloon catheter. Three (2%) patients suffered uterine hyper stimulation, eight (5.4%) had precipitate labour, one (0.7%) had uterine rupture while three (2%) of the patients had APH and PPH after induction of labour with misoprostol. Regression analysis showed no statistically significant association between uterine hyperstimulation (p-value 0.503, CI 0.038 – 4.991), Precipitate labour (p value 0.702, CI 0.178 – 12.951), antepartum haemorrhage (p value 0.999) and post partum haemorrhage (p value 0.999). There was no association between induction of labour using misoprostol and uterine rupture. There was no statistically significant association between Induction of labour using intracervical ballon catheter and uteine hyperstimulation (p - value 0.635 CI 0.158 – 20.624), precipitate labour (p-value 0.827 CI 0.230 – 6.287), antepartum or post partum haemorrhage. There was no association between induction of labour using intracervical ballon catheter and uterine rupture (p – value 1.00). Mean induction to delivery time using prostaglandins (misoprostol) was 15.2 hours with a range of 2.9 to 52.4 hours, 21.3 hours with intracervical balloon catheter with a range of 4.0 to 52.4 hours and 20.3 hours for membrane stripping with a range of 19.5 to 20.6 hours.

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Key words: Induction of labour, adverse maternal outcomes, associated factors

Conclusion: Induction of labour using either misoprostol or intracervical balloon catheter were not significantly associated with adverse maternal outcomes. There was no association between uterine rupture and induction of labour using either misoprostol or intracervical ballon catheter. The most common method of induction of labour used at the Women and Newborn Hospital involved use of misoprostol followed by the intracervical balloon catheter.

INTRODUCTION

Induction of labour, the commencement of regular uterine contractions using one of the available methods, with the sole aim of achieving a vaginal delivery, is a useful obstetric intervention in suitable recipients such as those with severe hypertensive disease of pregnancy, post dated pregnancy, intrauterine foetal demise, mothers not ready for caesarean delivery and other medical conditions.[1] Though a common practice at the Women and Newborn (University Teaching Hospitals - UTH), induction of labour (IOL) using one of the available methods bears important consequences for the mother which include heightened labour pain, uterine hyper stimulation and rupture, ante partum haemorrhage (APH), postpartum haemorrhage (PPH), infection resulting into chorioamnionitis, failed induction and subsequent operative delivery by caesarean section with extremes of maternal death.[2] Poor outcomes bear psychological and emotional consequences for both mothers and health providers and also tend to have important influences on future reproductive decisions of women.

In a large Scottish retrospective population based study that compared women of all ages on elective induction of labour without medical indication at weekly gestations from 37 to 41 weeks compared to expectant management, it was found that elective IOL in older women was associated with a reduction in perinatal mortality with an adjusted odds ratio of 0.15 (95% CI 0.03 – 0.68) at 37 weeks gestation.[3]This increased to 0.31 (95% CI 0.19 – 0.49) at 41 weeks without any increase in assisted vaginal deliveries or caesarean sections.

In a secondary analysis of the WHO global survey on maternal and neonatal healthby Vogel, Souza *et al* which involved 192, 538 deliveries in 16 countries across Asia and Africa, the rate of IOL was 4.4 percent in Africa and 12.1 percent in Asia of all deliveries.[4] The analysis also showed that oxytocin used alone was the most common method of IOL with success rates of over 80 percent. The authors also noted that odds of delivery by caesarean section were reduced in Africa (aOR 0.61, 95% CI 0.42 – 0.88), that IOL in Africa and Asian countries was generally lower when compared to high income countries and that IOL for medical indications (as opposed to elective IOL) could be associated with poorer outcomes attributable to maternal baseline risk factors.

In another study conducted in Nigeria to compare the effectiveness of 2 dozing regimes of Vaginal Misoprostol for cervical ripening and induction of labour by Adeniyi, Odukogbe*et al*, pregnant women with single low risk pregnancies at term were randomised to receive 25 µg or 50 µg of vaginal Misoprostol, labour complications such as precipitate labour, tachysystole and abnormal foetal heart rate changes were found to be greater in the group of women receiving 50 µg of Misoprostol.[5] The authors concluded that 50 µg of Misoprostol was effective for cervical ripening and IOL but was associated with more labour complications.

In a study that looked at factors associated with failed induction of labour at the University Teaching Hospital in Lusaka - Zambia by Chirwa, involving 5892 deliveries, the overall rate of IOL was found to be 2.65%.[6] Of all the inductions conducted, the main method of induction involved the use of Misoprostol at 71.7%, a combination of Misoprostol with subsequent Oxytocin in 22%, the use of Oxytocin only in 1.58% and the use of Foley's catheter only in 4.72%.

This study undertook to investigate maternal outcomes and factors associated with various

methods of IOL in use at the Women and Newborn Hospital (UTH) in Lusaka, Zambia.

METHODS

A cross sectional study was conducted at the Women and Newborn Hospital (UTH) – Lusaka. A total of 159 patients were recruited out whom 147 met the eligibility criteria. Data was collected using a structured questionnaire and analysed using SPSS version 25. Data analysis was stratified according to method of induction of labour. Multiple logistic regression was used to analyse maternal outcome by method of induction of labour. Crude odds ratios were used to analyse associated factors and only factors which showed significant association were subjected to simple logistic regression. P – value of < 0.05 at 95 percent confidence interval was considered statistically significant. Results were presented as tables and figures.

RESULTS

Slightly over 2500 deliveries and 1683 caesarean sections were performed over the period of data collection (December 2017 – April, 2018).The general characteristics of the study population are shown in table 1 below. The average age of participants was 29 years. Most of the participants were aged between 24 and 34 years (58.5%). The majority of women were married, 122 (83%) and originated from high density residential areas, 84 (57.1%). Of the women enrolled in the study, 48 (32.7%) had attained high school education.

Table1. Demographic features

	n	%
Age		
<20	11	7.5
20 - 24	21	14.3
24 - 29	51	34.7
30 - 34	35	23.8
≥35	29	19.7
Mean 28.98 SD 6.01	Median 28.0	Min 16 Max 42
Residence		
Low density	29	19.7
Medium density	34	23.1
High density	84	57.1
Marital Status		
Married	122	83.0
Single	25	17.0
Education		
Primary	23	15.6
Basic school	38	25.9
High school	48	32.7
College	25	17.0
University	10	6.8
None	3	2.0

Antenatal features

The table and graph below show the antenatal features and indications for induction of labour. The average age of the mothers was 29 years while average parity was two and average gravidity was three with an average gestational age of 36.2 months. The most common indications for IOL were hypertensive disorders of pregnancy at 53.4 percent most of which was severe preeclampsia (30.4%) followed by PPROM / PROM at 17.1%. Induction of labour for intra uterine foetal demise (IUFD) and postdated pregnancies were also significant.

Table 2. Antenatal characteristics

	n	Mean	SD	Median	Min	Max
Age	147	28.98	6.01	28.0	16	42
Gravidity	147	2.83	1.69	3.0	1	9
Gestation Age	147	36.17	4.41	37.0	20	45
Parity	147	2.40	1.77	1.0	0	9

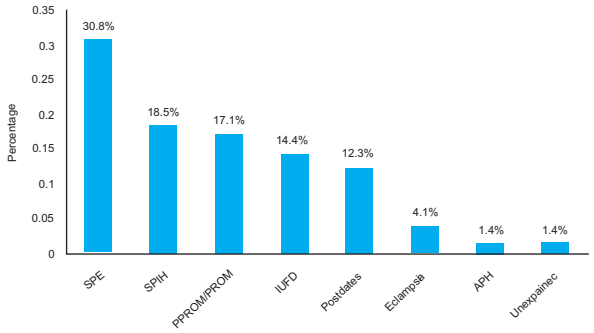

Figure 1: Indications for induction of labour

Method of IOL, outcomes and route of administration

The table below shows the method of IOL used, the outcomes and the route of administration used to induce labour.

Table 3. Method of induction of labour, Outcomes, Route of administration

Method of Induction of labour		
	n	%
Misoprostol	122	83
Balloon catheter	22	15
Amniotomy	0	0
Oxytocin	0	0
Membrane stripping	3	2
Adverse maternal outcomes		
Uterine hyper stimulation	3	2
Precipitate labour	8	5.4
Uterine rupture	1	.7
Antepartum haemorrhage	3	2
Postpartum haemorrhage	3	2
Misoprostol route of admnistration		
Oral	32	26.2
Vaginal	90	73.8

The majority of patients were induced using the prostaglandin E1 analogue misoprostol 122 (83%) most of whom used the vaginal route at 90 (73.8%). No patients were induced using either intravenous oxytocin or amniotomy during the duration of the study. Of the adverse maternal outcomes, three (2%) of patients suffered uterine hyper stimulation, eight (5.4%) had precipitate labour) after being induced with prostaglandins. One patient (0.7%) had uterine rupture while three (2%) of patients had APH and PPH respectively.

Method of IOL, mode of delivery and indications for caesarean section

The mode of delivery and indications for caesarean section by method of IOL are shown in table 4 below.

Table 4. Method of IOL, Mode of delivery, Indications for Caesarian section

Method of IOL	Mode of delivery		
		n	%
Intracervical balloon catheter (n=32)	SVD	25	78.1
	Caesarian section	7	21.9
Prostaglandins (Misoprostol) (n=122)	SVD	88	72.1
	Caesarian section	34	27.9
Membrane stripping (n=3)	SVD	3	100

Indications for caesarian section		
	n	%
Failed IOL	15	40.5
Foetal distress	7	18.9
Malposition	2	5.4
Poor progress	1	2.7
Cervical dystocia	2	5.4
CPD	1	2.7
APH	3	8.1
Postdates	1	2.7
Unexplained	5	13.5
	37	99.9

Of the patients induced using intracervical balloon catheter 25 (78.1%) delivered vaginally while 7 (21.9%) were delivered by caesarean section. 34 (27.9%). Of the patients undergoing IOL using misoprostol delivered by caesarean section while 88 (72.1%) delivered vaginally. All the patients induced by membrane stripping delivered vaginally as illustrated in table 4 above. Most of the patients, 15 (40.5%) were taken for caesarean section due to failed induction of labour and foetal distress 7 (18.9%).Induction to delivery time (IDT) for the different methods of IOL used is also shown in table 5 below. Mean induction to delivery time for patients induced with Misoprostol was 15.2 hours with a range of 2.9 to 52.4 hours, 21.3 hours with intracervical balloon catheter with a range of 4.0 to 52.4 hours and 20.3 hours for membrane stripping with a range of 19.5 to 20.6 hours.

Table 5. Induction to delivery time

			Induction to Delivery Time (Minutes)				
	n	Prevalence	Mean	SD	Median	Min	Max
Membrane Stripping	3	1.9%	1229.0	57.66	1234.0	1169.0	1234.0
Balloon Catheter	22	20.4%	1275.19	750.97	1044.0	241.0	3144.0
Prostaglandin	122	77.7%	912.45	458.20	907.0	176.0	3144.0

Table 6. Regression analysis of adverse maternal outcomes by intracervical balloon catheter

	p	Odds	95% C.I. Lower	Upper
Uterine hyper stimulation				
Yes	0.635	1.804	0.158	20.624
No (Reference)				
Precipitate labour				
Yes	0.827	1.202	0.230	6.287
No (Reference)				
Uterine rapture				
Yes	1.000	5827.0	0.000	
No (Reference)				
Ante partum haemorrhage				
Yes	0.999	0.000	0.000	
No (Reference)				
Post-partum haemorrhage				
Yes	0.999	0.000	0.000	
No (Reference)				

Table 6.1 Regression analysis of maternal outcomes by prostaglandins (misoprostol)

	p	Odds	95% C.I. Lower	Upper
Uterine hyper stimulation				
Yes	0.503	0.434	0.038	4.991
No (Reference)				
Precipitate labour				
Yes	0.702	1.519	0.178	12.951
No (Reference)				
Uterine rapture				
Yes	1.000	3505.2	0.000	
No (Reference)				
Ante partum haemorrhage				
Yes	0.999	3505.2	0.000	
No (Reference)				
Post-partum haemorrhage	0.999	3505.2	0.000	
Yes				
No (Reference)				

The table below (table 6.2) shows association between independent maternal factors and method of induction of labour by intracervical balloon catheter. Analysis showed that there was no association between IOL using intracervical balloon catheter and marital status, maternal age, gravidity, parity or gestational age. There was no association between residence and IOL by balloon catheter. However, there was an association between IOL with intracervical balloon catheter and oxytocin augmentation.

Table 6.2 Factors associated with maternal outcomes on IOL using intracervical Balloon Catheter

		Intracervical balloon catheter				p	Odds	95%CI
		Yes		No				
		n	%	n	%			
Marital Status	Married	30	93.8%	92	80.0%	0.118	3.750	0.835, 16.849
	Single	2	6.3%	23	20.0%			
Age						0.702	0.963	0.793, 1.169
Gravidity						0.857	1.062	0.551, 2.048
Parity						0.715	0.871	0.416, 1.826
Gestation Age						0.327	1.204	0.831, 1.744
Residence								
Low Density		8	25.0%	21	18.3%	0.551	1.492	0.589, 3.780
Medium Density		7	21.9%	27	23.5%	1.000	0.913	0.356, 2.342
High Density		17	53.1%	67	58.3%	0.751	0.812	0.370, 1.784
Education								
Primary School		9	28.1%	14	12.2%	0.055	2.823	1.090, 7.314
Basic School		10	31.3%	28	24.3%	0.757	1.412	0.597, 3.339
High School		6	18.8%	42	36.5%	0.092	0.401	0.153, 1.053
College		5	15.6%	20	17.4%	1.000	0.880	0.302, 2.562
University		1	3.1%	9	7.8%	0.591	0.380	0.046, 3.116
Mode of delivery	SVD	24	77.4%	82	73.2%	0.809	1.254	0.490, 3.211
	CX	7	22.6%	30	26.8%			
Labour augmented with Oxytocin		18	56.3%	27	23.5%	0.001	4.190	1.844, 9.522
Analgesia given to mother		11	34.4%	42	36.5%	0.988	0.910	0.400, 2.072

Table 6.3 Logistic Regression of factors associated with maternal outcomes on IOL using intracervical balloon catheter

	p	Crude Odds	Adjusted Odds	95%CI	
				Lower	Upper
Marital Status					
Married	0.998	3.750	6.478	0.000	
Single (Reference)					
Primary School Education	0.998	2.823	0.000	0.000	
High School Education	0.377	0.401	3.023	0.259	35.212
Labour augmented with Oxytocin					
Yes	0.212	4.190	4.766	0.411	55.236
No (Reference)					

The table below (table 6.4) shows factors associated with maternal outcomes on IOL by prostaglandins (misoprostol). Analysis showed that there was association between IOL using misoprostol and maternal age, gravidity, parity and augmentation of labour with oxytocin. There was no association between IOL using misoprostol and marital status, gestational age and residence.

Table 6.4 Factors associated with maternal outcomes on IOL using prostaglandins (misoprostol)

		Prostaglandins misoprostol				p	Odds	95%CI
		Yes		No				
		n	%	n	%			
Marital Status	Married	99	81.1%	23	92.0%	0.306	0.374	0.082, 1.702
	Single	23	18.9%	2	8.0%			
Age						<0.001	0.816	0.744, 0.896
Gravidity						<0.001	0.347	0.227, 0.531
Parity						<0.001	0.505	0.373, 0.683
Gestation Age						0.699	0.980	0.887, 1.084
Residence								
Low Density		24	19.7%	5	20.0%	1.000	0.980	0.334, 2.876
Medium Density		28	23.0%	6	24.0%	1.000	0.943	0.343, 2.590
High Density		70	57.4%	14	56.0%	1.000	1.058	0.444, 2.518
Education								
Primary School		14	11.5%	9	36.0%	0.006	0.230	0.086, 0.619
Basic School		32	26.2%	6	24.0%	1.000	1.126	0.413, 3.068
High School		44	36.1%	4	16.0%	0.086	2.962	0.955, 9.180
College		21	17.2%	4	16.0%	1.000	1.092	0.339, 3.510
University		9	7.4%	1	4.0%	0.861	1.912	0.231, 15.805
IOL Misoprostol route	Oral	32	26.2%	1	100.0%	0.600	0.970	0.913, 1.030
	Vaginal	90	73.8%	0	0.0%			
Mode of delivery	SVD	88	73.9%	18	75.0%	1.000	0.946	0.344, 2.599
	CX	31	26.1%	6	25.0%			
Labour augmented with Oxytocin		30	24.6%	15	60.0%	0.001	0.217	0.088, 0.535
Analgesia given to mother		46	37.7%	7	28.0%	0.489	1.556	0.604, 4.011

Table 6.5Logistic Regression of factors associated with maternal outcomes on IOL using prostaglandins (misoprostol)

	p	Crude Odds	Adjusted Odds	95%CI	
				Lower	Upper
Age	0.303	0.816	0.932	0.816	1.065
Gravidity	0.047	0.347	0.532	0.285	0.991
Parity	0.404	0.505	0.783	0.441	1.391
Primary School Education	0.434	0.230	0.581	0.150	2.261
High School Education	0.559	2.962	1.552	0.355	6.788
Labour augmented with Oxytocin					
Yes	0.012	0.217	0.218	0.067	0.714
No (Reference)					

DISCUSSION

The study showed the various methods of IOL in use at the Women and Newborn Hospital (WNH) of the University Teaching Hospitals. Analysis of resultsshowed that Induction of labour using prostaglandins (misoprostol) was not associated with uterine hyper stimulation (p value 0.503 95% CI 0.038 – 4.991) or precipitate labour (p value 0.702 95% CI 0.178 – 12.951). There was no association between uterine rupture and use of misoprostol (p value – 1.00) in the study. Use of Misoprostol was also not associated with antepartum or postpartum haemorrhage. The study showed that induction of labour using prostaglandins at UTH was not associated with serious adverse maternal outcomes. Induction of labour using intracervical balloon catheter was not associated with uterine hyperstimulation (p value 0.635 95% CI 0.158 – 20.624) or precipitate labour (p value 0.827 95% CI 0.230 – 6.287).

A total number of 2500 deliveries and 1683 caesarean sections were performed over the period of data collection (December to April 2018). 147 patients undergoing different methods of induction of labour were enrolled in the study. 122 (77.7%) patients were induced using prostaglandins (misoprostol), 22 (20.4%) were induced using intracervical balloon catheter while 3 (1.9%) were induced by membrane stripping. Oxytocin infusion

and Amniotomy were not used for IOL. Of the patients induced using misoprostol 32 (26.2%) used oral misoprostol while 90 (73.8%) used the vaginal route. The most common indications for IOL were hypertensive disorders of pregnancy at 53.4% followed by PPROM / PROM at 17.1%, intrauterine foetal demise (IUFD) at 14.4% and postdate at 12.3%. The rate of failed IOL was 10.5% and caesarean section rate was 27.9%. There was one maternal mortality of a woman on induction of labour with oral misoprostol, but the cause of death was not related to IOL after an autopsy confirmed the cause of death to be aortic dissection and not uterine rupture as earlier suspected. One patient who had undergone IOL with vaginal misoprostol had a ruptured uterus which was suspected to have been attributable to prolonged augmentation with oxytocin (19 hours).

Three patients suffered uterine hyper stimulation while eight had precipitate labour. According WHO, risks associated with induction of labour especially using prostaglandins include increased incidence of operative vaginal delivery and caesarean section, uterine hyper stimulation with foetal heart rate changes, meconium staining of liquor, APH, PPH, uterine rupture and maternal death.[7] Femke, Shalem and Gus in a study conducted in Australia on risk factors for failed IOL in nulliparous women using prostaglandins (dinoprostone), intracervical balloon catheter and oxytocin found maternal height (short stature), cervical dilatation and maternal age to be independent risk factors.[8] The study did not find intracervical balloon catheter or maternal age to be risk factors for failed IOL though the study did not evaluate maternal height in relation to IOL.

In a study by Chirwa, at the UTHin Lusak, on factors associated with failed induction of labour, they found a labour induction rate of 2.5 percent.[6] However, their findings on rate of failed induction of 13.7%was higher compared to 10.5 % found in the current study. The caesarean section rate of 27.9% found in the study was not any higher than the caesarean section rate among patients delivering at UTH who were not induced (caesarean section rate of about 35% at UTH). Induction of labour therefore, did not increase caesarean rate as an outcome.

According to the American College of Obstetricians and Gynaecologists (ACOG), elective IOL at 39 weeks gestation is associated with an increased risk of delivery by caesarean section. However, a recent study by Caughey Aaron in the ARRIVE trial (NCT 01990612) on their discussion on myths, facts and misconceptions about IOL did not find this association.[9,10]

All the patients who failed IOL were delivered by caesarean section thereby possibly increasing the caesarean section rate. For failed IOL with no other contraindication, a policy of repeat induction of labour could improve outcomes by spontaneous vaginal delivery (SVD). Several options could be adopted in the management of patients with failed IOL including expectant management, repeat IOL or caesarean section. In a study by Mateveke on factors associated with failed induction of labour in patients undergoing induction of labour with titrated oral misoprostol at Harare Maternity Hospital, with a failed induction rate of 23.9%, mothers who were managed expectantly after failed IOL, 19.4% delivered spontaneously without intervention.[11] The UTH Obstetrics and Gynaecology Protocols and Guidelines has no laid down standard guidelines for options to follow on failed IOL.[12]

Logistic regression showed that IOL using misoprostol was associated with maternal age (p – value <0.001, CI 0.816 – 0.896), gravidity (p – value <0.001, CI 0.227 – 0.531), parity (p – value <0.001, CI 0.373 – 0.683) and augmentation of labour with oxytocin (p – value 0.001, CI 0.088 – 0.335). However, logistic regression using adjusted odds ratios showed that only gravidity and oxytocin augmentation were statistically significant. The study also showed that IOL using intracervical balloon catheter was not associated with maternal age (p – value 0.702, CI 0.793 – 1.169), gravidity (p – value 0.857, CI 0.551 – 2.048), parity (p- value 0.715, CI 0.416 – 1.826 or gestational age (p – value

0.329, CI 0.831 – 1.744). There was also no association between residence, education or marital status. The study however, showed association between IOL with catheter and oxytocin augmentation (p – value 0.001, CI 1.844 – 9.522).

21.9% of mothers induced by intracervical balloon catheter were delivered by caesarean section while 27.9% of mothers induced with prostaglandins (Misoprostol) were delivered by caesarean section. There were no significant differences in rates of caesarean section among patients induced by either mechanical intracervical catheter (mechanical) or medically (Misoprostol). Furthermore, more patients (78.1%) induced by catheter delivered vaginally compared with those patients induced with prostaglandins (misoprostol) in whom 72.1% delivered vaginally. The study showed that mechanical IOL using intracervical balloon catheter was as effective as medical IOL using prostaglandins (misoprostol). This compares well with the South Australian guidelines by Jozwiak *et al* who note that "use of transcervical balloon catheter for pre-induction cervical ripening had been shown to be as effective, efficient, safe and reversible method with similar caesarean rates to prostaglandins with lower risk of uterine hyper stimulation".[9]

Among patients undergoing IOL with intracervical balloon catheter. 56.3% were augmented with oxytocin infusion while 24.6% of mothers induced with misoprostol were augmented. The study showed that more than 50% of mothers induced by mechanical method (catheter) required oxytocin augmentation. Clearly the need for oxytocin augmentation was much less with medical as compared to mechanical IOL.

34.4% of the mothers induced with catheter were given some form of analgesia (Pethidine or Fentanyl) while 37.7% mothers induced with misoprostol received any form of analgesia. This is significant because most mothers induced with prostaglandins (misoprostol) complain of "a lot of pain." More than fifty percent of mothers induced with catheter are augmented with oxytocin while more than seventy percent undergoing any form of IOL at the Women and Newborn Hospital are induced with misoprostol. There is need to revisit the issue of pain management in labour.

9.0% of mothers induced with misoprostol experienced diarrhoea, 12.3% were nauseated and 16.4% vomited. 3.1% of mothers induced with catheter had diarrhoea, none were nauseated and 3.1% experienced vomiting. Side effects particularly nausea and vomiting were more common with oral misoprostol while diarrhoea was more common with virginal misoprostol. Obstetricians need to be aware of these side effects.

Mean induction to delivery time for patients induced with Misoprostol was 15.2 hours with a range of 2.9 to 52.4 hours, 21.3 hours with intracervical balloon catheter with a range of 4.0 to 52.4 hours and 20.3 hours for membrane stripping with a range of 19.5 to 20.6 hours. The study showed that medical induction of labour with prostaglandins (misoprostol) had had a shorter induction to delivery intervall compared to mechanical IOL with catheter

CONCLUSION AND RECOMMENDATIONS

Induction of labour using one of the available methods is a safe and useful option in managing obstetric patients. The study showed that the dominant method of IOL at UTH was use of prostaglandin E_1 analogue (misoprostol). It is a relatively safe and effective option of IOL among mothers associated with few adverse maternal outcomes. Mechanical IOL with intracervical balloon catheter was found to be as effective as medical IOL though with a higher requirement for oxytocin augmentation. Induction to delivery interval was shorter with medical (misoprostol) compared to mechanical (intracervical balloon catheter / membrane stripping) IOL by an average of 6.1 hours. Obstetricians need to be aware of the side effects associated with IOL and manage the pain associated with both induction and augmentation of labour.

Study limitations

The UTH Women and Newborn Hospital Obstetrics and Gynaecology Protocols and Guidelines[11] need to provide clear guidelines on failed induction of labour. It need not necessarily amount to caesarean section. It should provide for expectant management, repeat IOL or outright bail out by caesarean section.There is also need to have 25, 50 and 100 microgram formulations of misoprostol tablet to allow for accurate dosing of the drug.

ACKNOWLEDGEMENT

All the women who concerted to unconditionally participate in the study.

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