Original Research Article

Indian Journal of Obstetrics and Gynecology
Volume 6 Number 3, May - June 2018
DOI: http://dx.doi.org/10.21088/ijog.2321.1636.6318.2

Comparison between Detected and Undetected Small for Gestational Age Foetus

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Abstract

Aim: To compare combined perinatal outcome and maternal characteristics between detected and undetected small for gestational age foetus. *Materials and Methods:* It is a prospective, observational cohort study done atmaternity referral perinatal centre with about 8000 deliveries per year. The sample comprised of mothers who delivered SGA neonates. Data was collected as maternal characteristics including age, body mass index, parity, risk factors for SGA, type of labour, mode of delivery, induction of labour rate, gestational age at delivery, rate of presumed fetal compromise leading to caesarean section assisted vaginal deliveries, low Apgar's, cord pH and composite neonatal morbidity between detected and undetected SGA. Composite neonatal morbidity includes respiratory distress, sepsis, neonatal hypoglycaemia requiring IV fluid, severe birth asphyxia and NICU admission for greater than 48 hours and neonatal seizure. *Results:* Prevalence of SGA was 6.4% with detection rate of 50%, significant risk factor for SGA was present in 37% cases so recognition of risk factor improves detection rate of SGA. Higher rate of induction and caesarean section rate were seen in detected SGA. Instrumental delivery rate was more in undetected SGA. Un detected SGA had more signs of fetal distress during labour, low cord pH and low Apgar, but NICU admissions were more in detected SGA. There was no significant perinatal mortality in term SGA babies. *Conclusions:* Every unit should have protocol to identify and manage SGA fetus for better outcome.

Keywords: Small for Gestational Age; Perinatal Outcome; Maternal Characteristics.

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Received on 28.04.2018,
Accepted on 14.05.2018

Introduction

Small for gestational age (SGA) fetus defined as estimated fetal weight less than 10th centile were at increased risk of stillbirth, neonatal morbidity and mortality [1]. SGA newborn babies are risk of immediate complications like respiratory distress, sepsis, necrotising entero-colitis, thrombocytopenia and neonatal death [2,3]. India has the world's largest prevalence of SGA births (46.9%) with 12.8 million in 2010, due to large number of births [4]. Prenatal detection of SGA is important because detection results in reduction of adverse perinatal outcome and stillbirth [5-8]. In most of the instances stillbirth are related with a failure to detect SGA in antenatal period. ACOG practice bulletin noted that at fetal weight less than 10th centile for gestational age, the risk of stillbirth rate is 1.5 higher and when weight was less than 5th centile the risk was 2.5%. ACOG reports that mortality is three fold higher among SGA births that were not prenatally detected as fetal growth restricted (21.3 per 1000 live births) in comparison with those that were detected prenatally (8.4per 1000 births) [9]. Many hospitals do not have audit on antenatal detection rates of SGA but few studies showed detection rates of 15-25%. We designed a prospective study to compare combined perinatal and

maternal outcomes between detected and undetected SGA.

Materials and Methods

It is a prospective, observational cohort study done at Fernandez Hospital Limited, Hyderabad, Telangana, India, a tertiary referral perinatal centre with about 8000 deliveries per year. The sample comprised of mothers who delivered SGA neonates from January 2016 – December 2016. After review of data of last 3 months combined perinatal outcome in detected SGA was 5% and 10% in undetected SGA. To prove the hypothesis with power of 80% and alpha error of 10% we need 342 patients in detected SGA and undetected SGA group.

Inclusion Criteria

Patients with term singleton pregnancy who delivered as SGA neonate based on customized GROW chart.

Exclusion Criteria

Patients with congenital anomalous baby, multifetal gestation, preterm babies.

Neonatal weight is measured at birth and plotted on customized grow chart, neonate with weight less than 10th centile were included in the study and reviewed the case notes to see whether SGA is detected or not in the antenatal period. Fetus who are diagnosed as SGA in antenatal period were classified as detected SGA, while those not diagnosed were considered as undetected SGA. The investigation and management of the small- for gestational- age fetus Green – top guidelines was followed to detect SGA. Assessment of risk factors is done at booking visit, gestational age determined using recommendations by International society of ultrasound in Obstetrics and gynaecology (ISUOG).

Patients with risk factors were monitored with serial growth scans from 26-28 weeks onwards. Women with no risk factors were monitored with symphysio fundal height measurement taken every 2-3 weeks from 24 weeks and plotted on to customised grow chart.

Growth scan is done when fundal height measurement plots below 10th centile for customised chart, consecutive measurements suggests no growth and slow growth curve not following slope of any curve on the chart. Detected SGA were monitored with serial scans and delivered at 37 weeks. Detected SGA is defined as case identified in antenatal period based on ultrasound, EFW below 10th centile for gestational age. Undetected SGA includes cases where SGA fetus not identified in antenatal period by clinical examination or by scan and diagnosed after delivery by checking birth weight and plotting on to customized chart.

Baseline information on age, body mass index, booking status, medical and obstetric history was collected. Maternal complications were defined as presence of any of the following: hypertensive disease, pregestational diabetes, gestational diabetes, any autoimmune disease, previous still birth, renal disease complicating pregnancy, unexplained ante partum haemorrhage.

Intrapartum details collected are mode of labour, mode of delivery, colour of liquor, pattern of cardiotocogram, caesarean sections/assisted vaginal deliveries done for presumed fetal compromise. Collected cord PH and base excess in cord ABG if it was done. Neonatal variables collected were a live/ still birth age, low APGAR, composite neonatal outcome and neonatal mortality rate. Compost neonatal morbidity includes respiratory distress, sepsis, neonatal hypoglycaemia requiring IV fluid, severe birth asphyxia and NICU admission for greater than 48 hours and neonatal seizure. We compared maternal socio demographic factors and maternal characteristics between detected and undetected SGA fetus. Second step we compared composite neonatal morbidity and perinatal mortality between detected and undetected SGA foetus.

Data was entered into a Microsoft excel sheet and analysed by statistical package. Descriptive analysis will be done where Categorical variable expressed as proportion while continuous variable expressed in mean±SD, median (IQ range) depending on normality of distribution. Chi square/fisher test will be applied for categorical variable and student t test for continuous variable for the analysis of data. Multiple outcome of interest will be compared between the study and control group reported as frequency measures, point estimates of associations and risk with 95% confidence interval around point estimate.

Results

We had 10453 deliveries in the study period. Total SGA were 897, Of this 684 cases were singleton term nonanamolous Small- for –gestational age babies. We had 342 cases in control group and 342 in study group.

Analysis of maternal characteristics showed no difference in mean maternal age and mean body mass index. Booked cases were less in detected SGA (315, 92%) compared to undetected SGA (332, 97.1%). Nulliparous is a risk factor for SGA, nulliparous mothers had more SGA babies compared to multiparous women. In SGA detected group nulliparous were 221(64.6%) compared to 194 (56.7%) in undetected group which was statistically significant (Table 1).

Major and minor risk factors were present in 149(43.6%) and 104 (30.4%) of detected and undetected SGA respectively. Symphysio fundal height was unreliable in 8 cases in detected SGA compared to 17 in undetected SGA. Risk factors for SGA were more in SGA detected group compared to undetected group. We analysed the detection rate of SGA in different ages, SGA detection rates were more between 33 to 37 weeks (227, 66.4%) compared to <32 weeks (93,27.2%) and > 37 weeks (22, 6.4%) (Table 2).

Induction of labour was done in 242 cases (70.2%) in detected SGA and 62 (18.1%) in undetected SGA which was statistically significant. Spontaneous onset of labour was maximum in undetected SGA (226, 66.1%) both elective and prelabour caesarean section were less in undiagnosed cases (Table 3).

In detected SGA indication for induction was SGA, and one case of non reactive CTG while in undetected SGA indications were oligohydramnios, postdate pregnancy, clinically SGA, and decreased fetal movements. Other reasons in undetected SGA were hypertension, diabetes and intrahepatic cholestasis.Labour characteristics differed in groups, abnormal CTG were 539 (15.5%) in detected SGA compared to 133 (38.9) in undetected SGA with p value of <0.001, which was statistically significant. Undetected SGA had more of meconium stained liquor (100, 29.2%) compared to detected SGA (22, 6.4%) with statistically significant p value < 0.001 (Table 4).

Mode of delivery, caesarean section rate was more in detected SGA (171, 50%) compared to undetected SGA (147, 43%), indications for Caesarean section varied in groups. Most common reason for CS in detected SGA was presumed fetal compromise 22.5% followed by previous caesarean section in 19.5% where as in undetected SGA, PFC was the reason in 56.6% and 22.1 % due to previous caesarean section,

Table 1: Maternal characteristics

	SGA detected N (%) or Mean(SD)	SGA not detected N (%) or Mean (SD)	P-value
Mean age(± SD)	27.69 (± 4.62)	27.69 (± 3.98)	0.209
Mean BMI (± SD)	25.52 (± 4.65)	25.90 (± 4.39)	0.471
Nulliparous	221 (64.6 %)	194 (56.7 %)	0.034
Spontaneous conception	329 (96.2%)	337 (98.5%)	0.056
Booked cases	315 (92.1 %)	332 (97.1%)	0.004
Mean booking visit(± SD)	17.83 (± 10.1)	17.42 (± 9.62)	0.528

Table 2: Complications in current pregnancy

	Detected SGAN (%)	Undetected SGAN (%)	P value
Previous still Birth	21(17.6)	16(10.8)	0.121
Renal/vascular disease	6(1.8)	5(1.8)	0.761
Antiphospholipidantibody syndrome	9 (2.6)	1(0.3)	0.011
Unexplained APH	5(1.5)	4(1.2)	0.737
PAPPA<0.40 MoM	23(6.7)	15(4.4)	0.410
Echogenic bowel	8(2.3)	8(2.3)	1
Pre gestational Diabetes	9(2.6)	7 (2.0)	0.613
Gestational diabetes	44 (12.9)	32 (9.4)	0.144
Preeclampsia	36 (10.5)	10(2.9)	<0.001
Hypertension	38(11.1)	28(8.2)	0.195

Table 3: Type of Labour in present study

Type of Labour	SGA Detected No (%)	SGA Not Detected No (%)	p-value
Induction of labour	242	62	<0.01
Spontaneous Labour	4	226	
Pre-labour C. Section	12	8	
Elective C. Section	84	46	

Table 4: Labour Characters

		FGR Detected No (%)	FGR Not Detected No (%)	P – value
CTG	Normal	289 (84.5)	209 (61.1)	< 0.001
	Abnormal	53 (15.5)	133 (38.9)	
Colour of Liquor	Clear	319 (93.3)	242 (70.8)	< 0.001
	Meconium stained	22 (6.4)	100 (29.2)	
	Blood stained	1 (0.3)	0	

p value <0.001. Women in undetected SGA group had more of assisted vaginal deliveries (53, 15.5%) compared to detected SGA (17, 5%) which was statistically significant (p value = 0.001). Mean gestational age at delivery in detected SGA was 37.13 weeks compared to 38.46 weeks in undetected SGA, as detected SGA had planned delivery at 37 weeks. (Table 5).

Neonatal characters were mean birth weight at delivery in detected and undetected SGA were 2103.17 grams(+270.38) and 2406.07 grams (+258.42) respectively. GROW centile less than 3rd was seen in 156 (45.6%) in detected SGA compared to 76 (22.2%) in undetected SGA. APGAR was less than 7 at 5 minute in two cases in undetected SGA whereas none had low APGAR in detected SGA. Detected SGA had cord ph between 7 -7.15 in 35 (12.7%) compared to 57 (22.7%) in undetected SGA. Acidic ph<7 was seen in two cases in undetected SGA. Base excess of >11 was seen in 7 cases of detected SGA while 18 cases of undetected SGA, which was statistically significant (Table 6).

Sub group analysis of neonatal outcomewas done based on gestational age at delivery. In undiagnosed SGA when delivered at 37-38 weeks had CTG abnormality in 30.5% compared to 15.5% in detected SGA. When delivered between 39-41 weeks, 49.3% and 16.7% had abnormal CTG in undetected and detected SGA respectively. Meconium stained liquor were 21.2% in undetected SGA compared to 6% in detected SGA when delivered at 37-38 weeks, 39.2% of undetected SGA and 33.3% of detected SGA had

Table 5: Mode of delivery among the study participants

Mode of delivery	SGA detected N (%)	SGA not detected N (%)
C-section	171 (50.0)	147 (43.0)
Spontaneous vaginal	154 (45.0)	142 (41.5)
Assisted vaginal	17 (5.0)	53 (15.5)
Indication for C-section		
Breech	17 (10.1)	3 (2.1)
Doppler compromise	11 (6.5)	0
Medical condition of mother	7 (4.1)	4 (2.8)
Maternal request	28 (16.6)	12 (8.3)
Non progress of labor	18 (10.6)	7 (4.8)
PFC	38 (22.5)	82 ((56.6)
Previous C-section	33 (19.5)	32 (22.1)
Others	17 (10.1)	1 (0.7)

Table 6: Neonatal characteristics

Neonatal variables	SGA Detected No (%) or Mean SD	SGA Undetected No (%) or Mean SD	p-value
Mean gestation age at delivery	37.13±0.42)	38.46 (±1.07)	<0.001
Mean birth weight (± SD)	2103. 17 (± 270.38)	2406.07 (± 258.42)	<0.001
GROW centile<3	156 (45.6)	76 (22.2)	<0.001
APGAR at 5 minutes Less than 7	0	2(0.6)	0.157
Cord Ph 7 to 7.15	35 (12.7)	57 (22.7)	0.003
Base excess more than -11	7	18	0.013
NICU admission	37 (10.8)	29 (8.5)	0.3
Male gender	180 (52.6)	168 (49.1)	0.359
Neonatal mortality	1(0.30)	0	0.317

meconium stained liquor at 39-41 weeks. In undetected SGA cord ph of 7-7.15 was seen in 19.5% vs 26.3% when delivered between 37-38 weeks and 39-41 weeks respectively. Cord ph of 7-7.15 was seen in 13% of detected SGA fetus who were delivered between 37-38 weeks age (Table 7).

Admission into NICU was needed in 37(10.5%) of detected SGA and 29 (8.5%) in undetected SGA, which was not significant. Common reasons for admission into NICUwere respiratory distress, sepsis and seizures. We had one neonatal death (0.3%) in detected SGA and none in undetected SGA. There were no stillbirths in both groups (Table 8).

Discussion

The prevalence of term SGA during study period was 6.5%, other studies showed 8.7% and 8.9% [9-10]. ACOG practice bulletin states that half of FGR are not diagnosed until delivery [12].

Mean maternal age was 27.9 years in both groups, with 8.7% were >35 years in detected group compared with 5.8% in undetected SGA. Similar results were seen in Chauhan et al study [9] with 8% vs. 9.25 in study and control groups. Nulliparous were 64.6% in detected SGA while it is 56.4% in undetected SGA, similar to study by Chauhan et al. [9] 51.9% vs. 49.5%. BMI less than 20 were seen in 7.9% and 4.9% in detected and undetected SGA respectively.

Early booking gives the opportunity to do first trimester combined screening for Downs syndrome, which gives information about pregnancy specific plasma protein (PAPP-A).

PAPP-A less than 0.415 MoM is a major risk factor for SGA. Low PAPP-A was seen in 6.7% vs 4.4% in detected and undetected cases (Table 9). We looked in to risk factors for SGA in both groups using RCOG guideline for screening and management of SGA, 149 (43.6%) had significant risk factors in detected SGA and 104 (30.4%) in undetected SGA [10]. We excluded paternal SGA, amount of fruit intake, daily exercise as we could not get correct information.

Monier et al. [12] showed presence of risk factors in 47.8% vs 22.6% in detected and undetected SGA respectively.Women with past history of stillbirth were at increased risk of SGA in subsequent pregnancy, 17.6% had past history of stillbirth in detected SGA compared to 10.8% in control group. Monier et al. [12] study showed past history of stillbirth rate seen in 5.1% and 1.3% in study and control groups. Pre eclampsia was seen in 10.55 vs. 2.3% in study and control groups which was similar to Monier et al (8%vs. 2.6% in study and control groups). Diabetes in pregnancy, renal , vascular disease complicating pregnancy, anti-phospholipid antibody syndrome and unexplained antepartum haemorrhage were more in detected SGA, but was not statistically significant . Chauhan and co-worker found four factors that made significant contribution for risk of SGA was younger age, history of substance abuse, size less than dates and sonographic fetal estimated weight in increasing order [9].

Identification of SGA is a challenge and it is difficult to differentiate SGA fetus from growth restricted fetus There is no treatment available for to alter the course of SGA except surveillance and delivering at appropriate time. Though the risk of

Table 7: Gestation at delivery and fetal outcome

		SGA detected	Undetected N(%)	P value
37-38 weeks	Meconium	20(6)	40 (21.2)	<0.001
	Abnormal CTG	52(15.5)	58(30.5)	<0.001
	Cord Ph 7-7.15	35(13)	26(19.5)	0.076
	NICU admission	37(11)	16(8.5)	0.353
39-41weeks	Meconium	2(33.3)	60(39.2)	0.772
	Abnormal CTG	1(16.7)	75(49.3)	0.116
	Cord Ph 7-7.15	0	31(26.3)	0.40
	NICU admission	0	13(8.5)	0.456

Table 8: NICU Admissions

Variables	SGA detected	SGA undetected
Respiratory Distress	15	11
Hypoglycaemia	14	9
Sepsis	11	7
NEC	1	1
Seizure	2	1

prematurity is less in late preterm, balance it with risk of continued intrauterine stay, stillbirth and organ damage due to hypoxia. There are few randomized trails addressing the optimal timing of delivery of early term SGA fetus.

Timing of delivery is important, the disproportionate intrauterine growth intervention trail at term (DIGITAT trail) concluded that no important difference in adverse outcomes between induction of labour and expectant managed groups in intrauterine uterine growth restriction [13]. So it is reasonable to choose induction to prevent possible neonatal morbidity and stillbirth, if women choose expectant management monitoring is more important.

A retrospective study [14] was done to estimate the risk of stillbirth for each week of gestation beyond 37 weeks in pregnancies with SGA fetus. Stillbirth risk for SGA was 251/10,000, the risk of stillbirth after 37 weeks was greater compared with pregnancies delivered in 37th week (47/10,000, 95% CI, 34.6-62.5 v/s 21/10,000 95% CI,13.0-32.1; RR, 2.2; 95% CI 1.3-3.7). The cumulative risk of stillbirth increased from 28/10,000 ongoing pregnancies at 37weeks to 77/10,000 at 39 weeks (RR, 2.75; 95 % CI 1.79-4.2).

RCOG recommends delivery at 37 weeks in near term SGA foetuses with increased umbilical artery PI and those with normal umbilical artery Doppler

Table 9: Various studies in comparison with our study

Variables	Detected SGA		Undetected SGA	
Mode of delivery comparison with other studies				
	Our Study %	**Lindquist et al** [16] %	**Our Study** %	**Lindquist et al**[16] %
Spontaneous vaginal delivery	154 (45)	371(54.5)	142 (41.5)	420 (73.3)
Assisted Vaginal Delivery	17(5.0)	23 (3.4)	53(15.5)	43 (7.5)
Caesarean section	171 (50)	287(42.1)	147 (43)	110 (19.2)
Comparison of risk factors for SGA:	Our Study	Monier et al[12]	Our Study	Monier et al[12]
History of stillbirth	17.6	5.1	10.8	1.3
Preeclampsia	10.5	8	2.3	2.6
Comparison of labour characters when delivered at 37-38 weeks and 39-42 weeks gestational age				
37-38 weeks	**Our Study** No %	**Silvia visentine**[15]	**Our Study** No %	**Silvia visentine**[15] No %
Abnormal CTG	43.80%	15.50%	30.50%	27.70%
Stained liquor	6.20%	6.1	21.20%	0%
Cord blood PH <77.15	0%	0%	1%	0%
	0%	13%	6.40%	19.50%
38-39 weeks				
Abnormal CTG	16.70%	22.40%	49.30%	30.10%
Stained liquor	33.30%	6.60%	39.20%	8.80%
Cord ph<7	0	0	1	0

Table 10: Comparison of neonatal outcome at time of delivery and complications

Variables	SGA detected Mean (%)		SGA undetected Mean (%)	
Comparison of neonatal outcome at time of delivery	**Our Study**	**Lindquist et al**[16]	**Our Study**	**Lindquist et al**[16]
Severe fetal distress	2 (0.5)	12 (1.8)	5 (1.4)	34 (5.9)
Apgar < 4 at 5 min	0	4(0.5)	2(0.6)	11 (1.9)
Neonatal seizures	2(0.6)	3 (0.4)	1(0.3)	3(0.5)
Umbilical ph< 7.0	0	7 (1.02)	2(0.6)	21 (3.6)
Neonatal complications	**Our Study**	**Chauhan et al** [9]	**Our Study**	**Chauhan et al** [9]
Composite neonatal morbidity	29 (8.4)	69 (30.1)	20 (5.8)	86(12.2)
Thrombocytopenia	0	11 (4.8)	0	13 (1.9)
Respiratory distress	15 (4.4)	49 (21.5)	11(3.2)	45 (6.4)
Sepsis	11 (3.2)	4 (1.8)	7(2.0)	22 (3.1)
Intraventricular haemorrhage	0	2 (o.9)	0	1 (0.1)
Seizure	2(0.6)	0	1 (0.3)	2 (0.30
Necrotizing enter colitis	1(0.3)	3 (1.3)	1 (0.3)	0
Neonatal death	1(0.3)	0	0	3 (0.4)

but reduced MCA PI. Offer delivery at 37 weeks in SGA fetus with normal Doppler [12].

In the absence of large randomised trail about time of delivery or study to examine the risk of stillbirth we advocate the policy of monitoring with fortnight scan for estimated fetalweight, amniotic fluid index, multi vessel Doppler and induction of labour was planned at between 37-38 weeks to reduce the risk of stillbirth.

Our study had detected SGA mothers induced at 37 weeks and spontaneous labour women were more in undetected SGA group. In undetected SGA the common reasons for induction were postdates, oligo hydramnios, decreased fetal movements.

During labour detected SGA were monitored by combination of intermittent auscultation with CTG monitoring. We found abnormal CTG and meconium stained liquor more in undetected SGA group compared with detected SGA which was statistically significant. We wanted to evaluate if labour characters in both groups differ based on gestational age at delivery in SGA cases. Comparison of labour characters with Silvia Vinsentin study [15], there was more of CTG abnormalities, meconium stained liquor, acidic ph in undiagnosed SGA when delivered at 39-41 weeks of gestation Overall caesarean section rate was more in detected SGA (50% in detected SGA vs. 43% in undetected SGA) similar to study by Lindquist et al as shown in Table 9 (42% in detected SGA vs. 19.2% in undetected SGA) [16]. Assisted vaginal deliveries were more in undetected SGA (15.5% in undetected vs. 5% in detected SGA). Similar difference was observed in Lindquist study, with instrumental delivery rate of 7.5% in undetected SGA vs. 3.4% in detected SGA. Caesarean section rate while a woman was in labour was more in undetected SGA 63.9% compared to 42.6% in detected SGA. This was in contrast to the study by Lindquist where 29.5% vs. 18% was section rate in labour in detected and undetected SGA groups. Presumed fetal compromise was the most common indication 56.6% for caesarean section followed by previous caesarean section in 22.1% in undetected

SGA. In detected SGA presumed fetal compromise contributed to 22.5% of caesareans. The increase in presumed fetal compromise in undetected SGA correlates with increased meconium and CTG abnormalities in this group. Non progress of labour contributed to 10.6% of caesareans in detected group and 4.8% in undetected SGA, may be due to increased induction rate in detected SGA.

Neonatal outcomes were compared with study by Lindquist, which showed lower rates of severe fetal distress in our study (Table 10) [16]. Severe fetal distress includes low Apgar score, neonatal convulsion and cord ph< 7.0. Similar to Lindquist study undetected SGA had more of low Apgar and cord ph< 7.0.

Neonatal morbidity includes respiratory distress, sepsis, thrombocytopenia, intra ventricular haemorrhage, neonatal hypoglycaemia requiring IV fluid and neonatal seizure.

NICU admission was required for various reasons; rate was 10.8% and 8.5% in detected and undetected SGA. Respiratory distress, sepsis, necrotising enterocolitis, hypoglycaemia were more in detected SGA than in undetected SGA but the difference is not statistically significant. Comparison of neonatal morbidity data with study by Chauhan et al. [9] showed similar rate of sepsis and NEC, but higher rate of respiratory distress and thrombocytopenia (Table 10). We had one neonatal death in detected SGA group and there were no stillbirths.

Strength of our study was it is done prospectively. The correct determination of gestational age, risk assessment for SGA was done at booking visit and based on anomaly scan findings.

Use of customised growth charts for symphysio fundal plotting improved our detection rate.

Limitation of study was exclusion of preterm SGA and long term neonatal complications we're not followed up.

Conclusion

Prevalence of SGA was 6.4% with detection rate of 50%, significant risk factor for SGA was present in 37% cases so recognition of risk factor improves detection rate of SGA.

Higher rate of induction and caesarean section rate were seen in detected SGA, which is similar to other studies. Instrumental delivery rate was more in undetected SGA. Un detected SGA had more signs of fetal distress during labour, low cord pH and low Apgar, but NICU admissions were more in detected SGA. There was no significant perinatal mortality in our term SGA babies. Every unit should have protocol to identify and manage SGA fetus for better outcome.

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