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Studyof Meconium Stained Liquor and Its Fetal Outcomein pregnant patient - retrospective study

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Abstract:
Background *Meconium staining of amniotic fluid has been regarded as a sign of fetal distress .The risk for meconium stained amniotic fluid are both maternal and fetal. These are hpertension, Gestational DM, maternal chronic respiratory or cardiovascular diseases, post term pregnancy, preeclampsia, eclampsia.*
Aims And Objectives: *To assesss the fetal outcome and mode of delivery in patients in meconium stained liquor during labour.*
Materials & Methods
This retrospective study was conducted from January 2019to JUNE 2019.The study was done on patients admitted to labour ward, in the department of Obstetrics and Gynecology at MDM HOSPITAL JODHPUR. Out of 4378 deliveries, 525patients had meconium stained liquor The meconium staining of the amniotic fluid was classified as Grade I, II, III.
Results: *fetal outcome and mode of delivery were analysedstatistically using SPSS.*
Conclusion: 83.80%of babies remained asymptomatic and required only routine care.So thatmeconium Stained Liquor is not associated with an adverse neonatal outcome.

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I. Introduction

Meconium staining of amniotic fluid has been regarded as a sign of fetal distress.Meconium thought to be passed from the fetal gastro-intestinal tract in response to hypoxia, mesentric vasoconstriction induced gut hyperperistalsis, vagal stimulation and normal physiological function of a mature fetus.[1,2].

A number of clinical conditions often pose potential risks to the mother and the baby if pregnancy is continued, and so induction of labour is indicated or opted for. In some situations induction of labour is done for patients or obstetricians convenience.

The risk for meconium stained amniotic fluid are both maternal and fetal. These are hpertension, Gestational DM, maternal chronic respiratory or cardiovascular diseases, post term pregnancy, preeclampsia, eclampsia.

The fetal factors include oligohydramnios, intrauterine growth restriction, poor biophysical profile.[11]

II. Aims And Objectives

To assesss the fetal outcome and mode of delivery in patients in meconium stained liquor during labour.

III. Inclusion And Exclusion Criteria

Inclusion criteria - Vertex presentation,Gestation age >37 weeks, singleton pregnancy with meconium stained liquor after spontaneous or artificial rupture of membranes during labour.

Exclusion criteria –Preterm pregnancy,, previous cesarean section, multiple pregnancy, breech& transverse lie and compound presentation

Contraindication for vaginal delivery i.e Contracted pelvis. Malpresentations. Previous Caesarean Section, Myomectomy. Hypertensive Disorders complicating pregnancy. Oligohydramnios. PROM ,Chorioamnionitis Medical Disorders complicating pregnancy

IV. Materials & Methods

This retrospective study was conducted from January 2019to JUNE 2019.The study was done on patients admitted to labour ward, in the department of Obstetrics and Gynecology at MDMHOSPITAL JODHPUR.

Pregnant patient with single fetus , vertex presentation with more than 37 weeks of gestational age were studied.

Out of 4378 deliveries, 525patients had meconium stained liquor.The meconium staining of the amniotic fluid was classified as Grade I, II, III. Grade I meconium stained liquor is translucent, light yellowish colour, grade II MSL is opalescent with deep green and light yellow in colour. Grade III is opaque and deep green in colour.

Table 1 Presence of MSL in total delivery

Total deliveries	Grade 1 MSL	Grade11MSL	Grade111MSL
4378	183(34.85%)	237(45.14%)	105(20%)

Table 2 Predisposing risk factors for MSL

Antepartum risk factor	Number	%
POST DATED PREGNANCY	155	29.52%
HDOP	85	16.19%
RH ISOIMMUNISATION	40	7.61%
OLIGOHYDROAMNIOS	75	14.2%
ANEMIA	68	12.9%
IUGR	35	6.66%
Gestational Diabetes Mellitus	15	2.85%
PROLONG LABOUR	20	3.80%

Table 3 NEONATAL OUTCOME ACCORDING TO GRADE OF MSL

GRADE OF MSL	ASYMPTOMATIC	NICU
Grade 1	185	12(14.11%)
Grade 11	170	25(29.41%)
Grade 111	85	48(56.47%)
Total	440(83.80%)	85(16.19%)

Table 4 MODE OF DELIVERY

MODE OF DELIEVERIES	Grade1	Grade 11	Grade 111
NORMAL DELIEVERY	130(71.03%)	138(58.22%)	13(12.38%)
LSCS	53(28.96%)	99(41.77%)	92(87.61%)
TOTAL	183	237	105

In our study, the total number of deliveries was4378 among which there were 525(11.99%)patients with meconium stained amniotic fluid. Grade I MSL = 183(34.85%), Grade 2 MSL = 237(45.14%), Grade 3 MSL =105(20%).(Table 1). Nirmala et al, in her study, told that there were 1267 deliveries among which MSL = 100(7.89%); Grade 1 MSL =39%, grade 2 MSL =43%, grade 3 MSL = 18%.[3]. Surekha et al, in her study,3673 deliveries among which MSL deliveries = 120(3.48%);Grade 1 MSL=34.16%, Grade 2 MSL= 29.16%, Grade 3 MSL= 36.66%.[4]. Rev Sauda et al, in his study, observed 11.9% of MSL deliveries.[5].

In our study, total 525 MSL deliveries, in which theantepartum risk factors for meconium stained liquor were post dated pregnancy155(29.52%)HDOP85(16.19%), Rh isoimmunisation40(7.61%), Oligohydramnios75(16.2%), GDM15(2.25%) , Aneamia 68(12.9%).IUGR 35(6.66%)The intrapartum risk factors were, IUGR35(6.66%), Prolonged labour20(3.80%) (Table 2). Shankyan et al, in his study, the risk factors for MSL out of 159 deliveries were Postdated pregnancy(47), IUGR(21), PROM(20), Higher Maternal Age (19), PIH(17).;.[6]

In our study, 440(83.80%)) of babies remained asymptomatic and required only routine care at birth. 85(16.19%) of babies required NICU admission. Of these 35 babies, 17(48.57%) of babies needed ventilatory support.(TABLE 3). Rekha Kumari et al in her study, 63(84.0%) were asymptomatic and 1(1.3%) had birth Asphyxia.[7]. Khazardoost et al observed 64(21.1%) with meconium aspiration syndrome.[8]. Espinheira MC et al in his study, there were 1.4% of NICU admission of which 43.1% needed ventilatory support.[9]

In our study, there were281(53.52%) vaginal deliveriesand244(46.47%) caesarean section.(Table 4).The total number of vaginal deliveries including instrumental vaginal deliveries were 144(56.7%).The caesarean sectionrate is higher among Grade 2 and 3 MSL compared to Grade 1 MSL in our study. Patil et al in his study, showed the caesarean rate as 42%.[10].

V. Conclusion

83.80%of babies remained asymptomatic and required only routine careSo that meconium Stained Liquor is not associated with an adverse neonatal outcome

Increasing Grade of MSL is associated with increased adverse outcome.increased caesarean section rate, increased neonatal complications.

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