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FETAL OUTCOME IN DELIVERIES OF PATIENTS WITH MECONIUM STAINED LIQUOR

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ABSTRACT

Objective: This study was carried out to look for the perinatal outcome of deliveries in pregnant women with meconium stained liquor.

Material and Methods: The study was undertaken in Obstetrics and Gynaecology Unit "C" of Khyber Teaching Hospital, Peshawar from February 2008 to October 2008. This was a prospective observational study. A total of 80 pregnant women with 37 weeks or more gestational age, who presented with meconium stained amniotic fluid, were enlisted in the study.

Results: A total of 80 cases were included in the study. Mean gestational age was taken as 38.7 weeks. Forty-seven (58.75%) cases underwent cesarean section wherefore 04 neonates had Apgar score < 7 out of which 02 (50%) survived while 02 (50%) could not be saved. Out of the 33 (41.25%) cases had vaginal deliveries, 19 (57.6%) had normal vaginal deliveries and 14 (42.4%) had instrumental vaginal intervention. There were 4 (5%) cases of pregnancy induced hypertension, 01 (1.25%) case of gestational Diabetes Mellitus; in both the mentioned conditions the Apgar score was > 7 in first 5 minutes and the neonates successfully survived. 02 (2.5 %) cases had Meconium Aspiration Syndrome however the neonates were recovered. 02 (2.5%) cases had birth asphyxia with 100% perinatal mortality. The results denote comparatively bad prognosis in pregnant women having meconium stained amniotic fluid.

Conclusion: Meconium stained amniotic fluid is associated with higher rate of caesarean sections, increased birth asphyxia and Meconium Aspiration Syndrome emphasizing the need to be careful in dealing with such pregnancies and to ensure the availability of resuscitation equipment at the time of delivery.

Key Words: Meconium stained liquor, fetal outcome.

INTRODUCTION

The presence of meconium in amniotic fluid is a serious sign of fetal compromise which is associated with an increased perinatal mortality and morbidity[1]. Meconium stained amniotic fluid is considered a signal of fetal compromise as it is directly related with fetal distress and Meconium Aspiration Syndrome[2]. In earlier days, early amniotomy with active management of labour was done to detect meconium passed during labour[3]. Meconium passage is rare before 34 weeks of gestation however after 37 weeks, its incidence increases steadily due to rising levels of the hormone, motilin[4,5]. Factors such as placental insufficiency, maternal hypertension, pre-eclampsia, oligohydramnios or maternal drug abuse (tobacco, cocaine) result in, in utero passage of meconium[6]. Passage of meconium in utero with staining of the amniotic fluid occurs in 12% to 16% of all deliveries[7]. Meconium Aspiration syndrome represents a leading cause of perinatal death[8].

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MATERIAL AND METHODS

A prospective observational study was undertaken in Obstetrics and Gynaecology Unit "C" of Khyber Teaching Hospital, Peshawar. The study was performed over a period of nine months from February 2008 to October 2008. A total of 80 pregnant women with 37 weeks or more gestational age, who presented with meconium stained amniotic fluid, were enlisted in the study. Women with singleton pregnancy, cephalic presentation and presence of meconium stained liquor were eligible for the study. Patients with antepartum hemorrhage, multi-fetal gestation and fetuses with congenital anomalies were excluded.

RESULTS

A total of 80 cases were included in the study. Mean gestational age was 38.7 weeks. Mode of delivery was mainly influenced by the presence of meconium. Forty-seven (58.75%) cases underwent caesarean section wherefore 04 neonates had an

Apgar < 7 out of which 02 (50%) survived while 02 (50%) could not be saved. The remaining 33 of 80 (41.25%) cases had vaginal deliveries; 19 (57.6%) had normal vaginal deliveries and 14 (42.4%) had instrumental vaginal intervention.

There were 4 (5%) cases of pregnancy induced hypertension, 01 (1.25%) case of gestational Diabetes Mellitus; in both the mentioned conditions the Apgar score was > 7 in the first 5 minutes and the neonates survived. Two (2.5%) cases had Meconium Aspiration Syndrome however the neonates were recovered. Another 02 (2.5%) cases had birth asphyxia with 100% perinatal mortality. The outcome denotes comparatively bad prognosis in pregnant women having meconium stained amniotic fluid. Neonates with Apgar score >7 in first 5 minutes were not in distress.

DISCUSSION

This study was done to find out the risk of adverse fetal outcome associated with meconium stained amniotic fluid. Increasing gestational age is related to increased risk of staining of amniotic fluid with meconium. This can be explained by the fact that the hormone motilin is secreted in greater quantities by the fetus as gestational age advances. Sunoo et al found significantly increased meconium in amniotic fluid at 39 weeks of gestation[9]. In our study, only 4 neonates (5%) had an Apgar score of less than 7 in the first five minutes. Wiswll et al found significantly lower one minute Apgar score but not in five minutes[10]. Contrary to ours and Wiswell et al study, Sedaghatian et al[11], Oyelese et al[12] and Mst. Hosna Ara Khatun et al[13] had significantly lower five minute Apgar scores.

In our study, pregnancy induced hypertension, was found in 4 cases (5%) but it was quite high in the study by Hosna Ara Khatun et al[13]. Meconium stained amniotic fluid occurrence during labour is associated with increased cesarean section rate and foetal morbidity and mortality[14]. 58.75% cases underwent cesarean section in our study which is significantly low compared to 75% reported in the study by Hosna Ara Khatun[13] and 82% in a study by Erum Majid Shaikh et al[15]. Saunders et al reported that caesarean sections were performed twice as frequently in subjects with meconium stained amniotic fluid[16].

Birth asphyxia occured in 2 cases (2.5%) in our study compared to 12.9% in a study by Khatun[17]. Meconium Aspiration Syndrome occured in 2 cases (2.5%) in our study whereas it is reported to be 12.9% by Patil et al[2] and was significantly high in the study by Hosna Ara Khatun et al[13]. The perinatal mortality in the present study was 5% whereas it was 3.75%, 2% and 2.9% in studies by Hosna Ara Khatun et al[13], Khatun[16], Erum Majid Shaikh et al[14] and Khatun, Patil et al[2] respectively.

CONCLUSION

Meconium stained amniotic fluid is associated with higher rate of caesarean sections, increased birth asphyxia and Meconium Aspiration Syndrome emphasizing to be careful in dealing with such pregnancies and to assure the availability of resuscitation equipment at the time of delivery.

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