

Foetal macrosomia: a case report

A. G. Kirane^{1*}, N. B. Gaikwad², P. E. Bhingare³, V. D. Mule⁴

¹Senior resident, ²Assistant Professor, ³Associate Professor, ⁴Professor and Head, Department of Obstetrics and Gynaecology, Government Medical College, Miraj – 416410, Maharashtra, INDIA.

Email: akhilesh_kirane@yahoo.co.in

Abstract

Introduction: Foetal macrosomia is defined conventionally as newborn weight exceeding 4000gm. various maternal and foetal factors predispose to foetal macrosomia. The incidence of foetal macrosomia is increasing and has highlighted the management dilemma of vaginal delivery or caesarean delivery to selected for suspected foetal macrosomia. **Case Report:** A 25 yr old fourth gravida with 39 weeks gestation, booked in our ANC clinic, with first trimester BMI 34kg/m² and normal glucose tolerance tests, presented in labour. Her antenatal USG done in 38th week predicted the weight of the baby to be 3770kg, clinically foetal macrosomia was expected and all preparations to tackle the complications, her labour progressed without any arrest. During delivery, there was shoulder dystocia which was immediately tackled by expert obstetrician. Baby weighed 4.74 kg and had reduced movement in right upper limb movement which was regained in 24hours and discharged immediately. **Discussion:** It is possible to avoid unnecessary caesarean section in mothers with macrosomic babies if they are diagnosed well in advance of labour by clinical and ultrasonographic methods and thus being prepared for all possible complications during labour. This will help reduce caesarean section complication like Post-partum haemorrhage and obesity related post-operative complications thus reducing maternal morbidity. Ecker *et al* concluded that an excessive number of unnecessary caesarean deliveries would be needed to prevent a single brachial plexus injury in infants born to women without diabetes. **Conclusion:** Majority of macrosomic infants can be delivered vaginally if diagnosed and anticipatory measures to tackle possible complications are taken early, this will reduce the maternal morbidity due to unnecessary caesarean sections to a great extent. Planned caesarean delivery on the basis of suspected macrosomia to prevent brachial plexopathy is not a reasonable strategy in general population.

Keywords: macrosomia, shoulder dystocia.

*Address for Correspondence

Dr. Akhilesh G. Kirane, Senior Resident, Department of Obstetrics and Gynaecology, Government Medical College, Miraj, Maharashtra, INDIA.

Email: akhilesh_kirane@yahoo.co.in

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INTRODUCTION

In the ever on-going argument between vaginal and caesarean mode of deliveries, Foetal macrosomia poses another big dilemma. Foetal macrosomia is defined conventionally as newborn weight exceeding 4000gm while the ACOG (2000) concluded that the term macrosomia was an appropriate designation for fetuses who weigh 4500g or more at birth¹. Factors predisposing to foetal macrosomia are diabetes (gestational, chemical or insulin dependent), obesity, post datism, multiparity, advance maternal age, previous LGA infant and large stature. Foetal factors include genetic or congenital disorders. Maternal obesity is associated with three to four fold increased likelihood of

foetal macrosomia¹. The incidence of foetal macrosomia is increasing, more so in affluent areas like in urban centres. In general, macrosomia has become a taboo of sorts among obstetricians and in many centres "prophylactic" labour induction-to obviate further foetal growth and thereby reducing potential delivery complications-or Elective caesarean delivery are preferred. But as recommended by ACOG², early induction of labour or elective caesarean section for women with suspected foetal macrosomia who do not have diabetes does not improve either maternal or foetal outcome. Considering the increased risk of caesarean delivery after prophylactic labour induction and increased risk of postpartum haemorrhage and obesity-related postoperative complications like wound dehiscence and Thromboembolism after caesarean delivery, vaginal delivery remains an attractive option.

CASE REPORT

A 25 yr old fourth gravida with 39 weeks gestation who was booked in our ANC clinic and received regular antenatal checkups and medications, with first trimester BMI 34kg/m² with normal glucose tolerance tests, presented with pain in abdomen to the delivery room. Her antenatal USG done in 38th week predicted the weight of the baby to be 3770kg. Her

previous three babies weighed 3.3kg, 3.1 kg and 3.8 kg respectively. On examination, her vitals were stable and she had good contractions with adequate liquor with Per-vaginal examination revealing 5-6 cm dilatation with good effacement, intact membranes, station at 0 with LOA position and pelvis adequate for the baby. Clinically her baby weight was predicted to be about 4 kg by Leopold's manoeuvre and all preparations to tackle complications of Macrosomia were done, her labour progressed without any arrest. During delivery, there was shoulder dystocia with anterior shoulder behind the pubis symphysis and posterior shoulder in the hollow of sacrum, after using McRoberts manoeuvre and suprapubic pressure, baby was delivered by delivering the posterior shoulder and arm followed by anterior shoulder. Baby weighed 4.74 kg and had reduced movement in right upper limb was shifted to NICU for observation. Baby was discharged without any complications and with full range of movement in upper limbs in 24 hours.



DISCUSSION

The diagnosis of foetal macrosomia is imprecise. For suspected foetal macrosomia, the accuracy of estimated foetal weight using ultrasound biometry is no better than that obtained with clinical palpation (Leopold's maneuvers)². The risk characteristics that increase the probability of the delivery of a macrosomic infant include maternal obesity, multiparity, previous macrosomia infant, maternal diabetes mellitus, postdatism, pre pregnancy weight / height, body mass index, advanced maternal age etc³. Macrosomic infants are at elevated risk of shoulder dystocia, brachial plexus injury, skeletal injuries, meconium aspiration, perinatal asphyxia, hypoglycemia and foetal death. Maternal complications are related to cephalopelvic disproportion and include prolonged labour, labour augmentation, caesarean section, postpartum hemorrhage, infection, thromboembolic events and anaesthesia events Labor and vaginal delivery are not contraindicated for women with estimated foetal weights up to 5,000 g in the absence of maternal diabetes². Obstetricians are confronted with a management dilemma when faced with the women at term carrying what is thought to be an unusually large fetus. As per ACOG guidelines, the role of caesarean delivery in suspected foetal macrosomia remains controversial, large cohort and case-control studies reveal that it is safe to allow a trial of labor for estimated

foetal weight of more than 4,000 g, the results of these reports, along with published cost-effectiveness data, do not support prophylactic caesarean delivery for suspected foetal macrosomia with estimated weights of less than 5,000 g. The shoulder dystocia rates increase with greater birth weight, the majority of these injuries recover completely but fewer than 10% have some permanent sequelae². In our case, estimated foetal weight by clinical methods was about 4000gm with mother having obesity (BMI 34 kg/m²) and history of previously delivered baby weighing 3.8 kg, thus we had taken all precautions to tackle the complications of delivery of macrosomic baby, especially shoulder dystocia. As was expected, shoulder dystocia did present but was rapidly managed because of early anticipation of the condition and expert obstetrician help had been summoned before delivery. There was some evidence of neurological injury to the upper arm but it rapidly regressed and baby had full range of movements of both upper limbs in 24 hours. Hence, it is possible to avoid unnecessary caesarean section in mothers with macrosomic babies if they are diagnosed well in advance of labour by clinical and ultrasonographic methods and thus being prepared for all possible complications during labour. This will help reduce caesarean section complication like Post-partum haemorrhage and obesity related post-operative complications thus reducing maternal morbidity. Ecker *et al* concluded that an excessive number of unnecessary caesarean deliveries would be needed to prevent a single brachial plexus injury in infants born to women without diabetes⁴.

CONCLUSION

Majority of macrosomic infants can be delivered vaginally if diagnosed and anticipatory measures to tackle possible complications are taken early, this will reduce the maternal morbidity due to unnecessary caesarean sections to a great extent. Although, risk of shoulder dystocia is increased in macrosomic infants, it can be dealt with expert help and its sequelae can be minimised. Planned caesarean delivery on the basis of suspected macrosomia to prevent brachial plexopathy is not a reasonable strategy in general population.

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