

Case Report

Unusual Twin Delivery Resulting in Different Birthdays

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Abstract: We report a case of diamniotic, dichorionic pregnancy presented at 36 weeks with premature rupture of the first amniotic sac. The twins were delivered 12 hrs apart vaginally resulting in different birthdays.

Keywords: Multiple pregnancies, Delayed delivery, Selective delivery, Twins.

INTRODUCTION

The incidence of twin pregnancy has found to be increased worldwide over the past decade largely as a consequence of the assisted reproductive technologies [1]. The perinatal mortality and morbidity rates in twin pregnancies are 10-fold higher than single gestations [2].

Intrapartum monitoring and operative interventions, especially with regard to the second twin, provide a unique challenge in labour and delivery [1]. There is no consensus in relation to the optimum time interval between the births of the twins [2-4]. A prolonged twin-to-twin delivery time interval is an independent risk factor for an adverse neonatal outcome of the second twin [5]. A limit of 15–30 min for twin-to-twin delivery interval has been suggested [6].

CASE REPORT

Antenatal

A 39 year old Caucasian lady in her fourth pregnancy presented at antenatal clinic at eleven weeks gestational age, having had 2 vaginal deliveries in the past and a first trimester foetal loss. The booking ultrasound scan confirmed a dichorionic diamniotic twin pregnancy. All booking bloods were within normal limits. Conception was spontaneous, not assisted.

The twenty week anomaly scan showed no obvious structural problem with either twin. Growth scans from 24 weeks were normal until 34 weeks when discordant growth was apparent: twin 1 on the 10th centile and twin 2 on the 90th centile. Scan one week later, estimated the weight of twin 1 as 2005 gm and Twin 2 as 2835 gm. Liquor volume and umbilical artery Doppler were normal for both twins. The discordant growth pattern persisted at an ultrasound scan at 36

weeks gestation so induction of labour was planned within a week.

Labour

Spontaneous rupture of membranes occurred after the vaginal examination to assess the cervix for induction of labour. On attending delivery suite the cardiotocograph (CTG) monitoring of both babies was reassuring, so the plan was to augment labour after 24 hrs if spontaneous labour did not ensue. The patient attended delivery suite the next day as planned for augmentation of labour. On examination both twins were presenting cephalically, with twin 1 engaged deeply in the maternal pelvis: the cervix was 2 cm dilated, and the amniotic membranes were absent.

A foetal scalp electrode (FSE) was applied to monitor twin1 and twin 2 was monitored abdominally. Labour was augmented as per departmental guidelines for multiparous women with intravenous syntocinon. Within 5 hours of uterine contractions, the cervix was fully dilated and twin one was delivered vaginally in excellent condition.

Delayed delivery of twin 2

Twin 2 was confirmed as presenting head first by portable ultrasound. Despite ongoing uterine activity the attending doctor was unable to perform artificial rupture of membranes for the second twin and consultant help was sought. The consultant attended within 30 minutes and confirmed that the cervical dilation was only 2 cm and the fetal head was above the pelvic brim: the consultant was also unable to rupture the membranes around twin 2. At that time, the patient not only declined a caesarean section for delivery of twin 2 but also declined any further attempts at artificial rupture of membranes without the benefit of epidural analgesia. Augmenting labour with syntocinon when foetal membranes are intact or inserting an epidural

under the same circumstances was contrary to departmental guidelines and the attending anaesthetist was not prepared to deviate from them, despite the difficulties of this case.

This resulted in an unusual situation and discussions took place between consultants, including the consultant on call for the tertiary referral centre: no one had any experience of delaying a second twin delivery beyond thirty minutes at this gestation. After further discussion with the patient and her partner a plan was agreed to stop the syntocinon and await events for an arbitrary time limit of 12 hours providing the CTG remained reassuring.

After four hours there were concerns with the CTG. Examination found the cervix was 3-4 cm dilated and the station of the foetal head was unchanged (4/5 palpable abdominally above the pelvic brim). It was agreed that the patient would be taken to the delivery theatre and artificial rupture of membrane (ARM) attempted under a spinal anaesthetic: the patient did agree then that should the foetal cord prolapse, delivery could be achieved by immediate caesarean section.

At ARM clear liquor drained, the cervix stretched to 6 cm and the foetal head descended into the pelvis. A FSE was applied to monitor the foetal heart and syntocinon was restarted. Full cervical dilation was reached after 6 hours without any further suspicious changes in the CTG and twin 2 delivered normally with Apgar scores of 9 at 1 and 9 at 5 minutes.

The birth weight of twin 1 was 2.185 kg and twin 2 was 2.750 kg. The twins were born 12hrs and 5 minutes apart. They were born on different days as the labour occurred over night.

DISCUSSION

The delivery of the second twin is a controversial subject. The twin-to-twin delivery time interval is one variable, potentially under the control of the obstetrician [4]. The interval between the births of the twins is significantly longer when the second twin is in cephalic presentation. There is also a statistically significant relationship between inter-twin time interval and the umbilical artery pH of the second twin after vaginal birth of the first one, in both monochorionic and dichorionic pregnancies: the degree of correlation is very low [2].

The twin-to-twin delivery time interval has been reported to have little impact on the perinatal mortality of the second twin [7]. In cases of uncomplicated twin delivery with normal CTG there is no necessity of the second twin to be born shortly after the first twin [8].

Factors such as the level of experience of the obstetrician in charge, initial management strategies of

a more expectant or a more active procedure in delivering the second twin, the competence of intrauterine manipulation, progress of labour, and the wish of the women giving birth may confound the twin-to-twin delivery time interval.

CONCLUSION

The delivery of twins presents challenges to the obstetric team in terms of decision-making, technical skills required and quicker response to the changing circumstances [9].

Without doubt most obstetricians given these same circumstances would advocate a caesarean section for the second twin, but this case illustrates that deviation from expected practice can still be completely safe.

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