The AHSN Network

NHS Improvement

Milton Keynes University hospital

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Title: Births on the verge of viability Milton Keynes University Hospital

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- 22h40: Referral from A&E to Obstetric registrar 22+6 wks pregnant patients with mild vaginal bleeding and abdominal pain.
- Referral accepted by Obstetric registrar ,to transfer patient to labour ward.
- 23h00: Mother arrives in labour ward.
- 23h03: Seen by obstetric registrar .
- 23h04: neonatal team crash call.
- 23h05: Baby born in poor condition. HR <100/min
- 23h06: Neonatal SHO arrived.
- 23h08: Neonatal registrar arrived, Baby initially given to mother. As team unsure whether or not to resuscitate as <23 wks gestation.

- 23h12: On call Neonatal consultant contacted.
- 23h13-15: Decision to resuscitate.
- 23h16-18: CPR 2 min
- 23h20: HR<60 /min, Baby placed in plastic bag.
- 23h23; Neonatal consultant advised to continue CPR till he arrives.
- Discrepancy in gestation 22+6 or 23 wks.
- 23h30: HR >100/min. Good chest rise. BW: 450gms
- 23h35: Neonatal registrar called SONET.
- 23h40: Baby intubated,2nd attempt.
- 23h59: surfactant given.

SONET

- **Interim**
- SONET spoke to NICU consultant at JRH -> gave odd of 10% survival, 50% significant morbidity.
- NICU consultant advised discussion with parents to ascertain wishes.
- **00h25**: **Parents stated want full resuscitation for their baby.**
- 00h30 :SONET updated re parental wishes -> agreed to retrieve baby.
- 01h00: Baby transferred to NNU for further stabilisation and to await transfer to NICU.

On NNU

- BW 450g, temperature 36.6 degrees.
- Started SIPPV + VG at 5ml/kg. FiO3 35%.
- Normal BP
- Cr uss – normal
- Hb 88g/L on initial gas – given emergency O Rh neg blood 20ml/kg bolus, followed by further 20ml/kg infusion
- IV maintenance fluids started at 90ml/kg/day.
- Partial sepsis screen + IV antibiotics
- Transferred to JRH at +/- 07h00 17th June 2019 (+/- 8 hours of age)

Care at JRH

- Cranial uss:

On Day 2 (following drop in Hb) Bilateral IVH identified (Grade 2 on left, grade 3 on right – with extensive parenchymal involvement and midline shift.

Further discussion with parents:

Long term outlook very poor with high risk of long term neurodevelopmental adverse outcome. Parents still wished to continue active treatment.

On Day 3, more extensive bleeding on right side with further midline shift over to the left. Also associated abnormal movements suspicious of seizures –loaded with phenobarbitone.

Severe risk of disability re-iterated , Parents decided transition to comfort care.

- Baby passed away 17h45 on Day 3 in parents arms.
- Bereavement support being provided by Tracy Rea, Bereavement midwife.
- Case will also be discussed in JRH M&M.

- G2 P0. 1 x m/c.
- Booked at 10 weeks.
- No PMHx. No regular medication. Smokes 10 cigs/day.
- Booking Bloods: Negative Hep B, HIV, VDRL, O Rh neg (no antibodies detected), Haemoglobinopathy screen negative.
- Normal anomaly scan at 20+3 weeks. NT 1.9mm at 13+3 weeks scan. From scan reports, conception spontaneous, known smoker.

- Previous admission at 14 weeks with self harm and PV spotting. Also disclosed domestic abuse (psychological rather than physical). Had been escalated to safeguarding team. Mum had been referred to MKACT.
- Previous admission to A&E at 22+ 1 weeks with suicidal thoughts, self harm and noted to have PV bleeding.
  - Kleihauer negative.
  - HVS & UMC&S negative.
  - Noted to have high alcohol levels and negative for paracetamol & salicylates.
  - USS showed area of haemorrhage 57x57x45mm inferior to placenta extending to internal os.
  - Self-discharged next day.
  - Had been referred to perinatal mental health team following Hospital mental health team assessment prior to discharge.

Placental histology showed acute chorioamnionitis but no evidence of infarcts / Haemorrhage.

Perinatal meeting 12/07/19 MKUH

- History and presentation as above.
- It transpired mother had been admitted to A&E at 20h10 – 2.5 hours before referral to O&G Registrar.
- Earlier notification might have allowed:

1. Discussion with JRH NICU as to whether or not to resuscitate / retrieve.
2. If for resuscitation, to give MgSO4 + at least one dose ANS.
3. Ensure Neonatal Consultant present at the delivery.

Neonatal team discussion

- It was agreed that it was a difficult situation with no medical history to work with and the parents indicated that they were aware that all that could be done was done and were happy with the proceedings.
- There was a degree of uncertainty about gestation and it was agreed that chest compressions cannot be done below 26 weeks, only ventilation support can be given.
- The delay in transfer to NNU was due to making the decision whether or not to transfer to JRH. Staff were unsure that JRH would accept the baby and a decision for treatment had to be made.
- It was agreed that nothing else could have been done as the best course of treatment was followed.

JRH Perinatal meeting 31/07/19

Learning points:

- Remember that chest compression and drugs are not offered routinely to babies born <26 weeks gestation.
- It is important that pregnant women who are potentially in labour are referred/transferred to obstetric care as soon as possible to give more time for appropriate antenatal management (steroid, MgSO4).

Actions:

- To discuss further locally in MKH with A&E team re management and referral of pregnant women potentially in labour (ZG).
- To share minutes with local hospital (GV)

Dilemma

- Current guidelines (our local GL plus BAPM) state babies <23 weeks are not for resuscitation.
- **There is an increasing practice of transferring women in-utero < 23 weeks gestation where they sometimes deliver before 23 weeks in a tertiary centre.**
- It is known that the outcome for babies born outside of a tertiary centre is much worse (hence need for exception reports).
- The consultants covering neonatal units on LNU's are frequently general paediatricians who are uncomfortable with resuscitating such small babies.

THANK YOU