Elective Report

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Discuss multiple births in the Context of Global Health:

I was fortunate enough during my elective at the Lister hospital to see several multiple births either on the labour ward or in theatre. There is a distinct air of excitement on the ward with such deliveries – and particularly with those women expecting more than two babies. This is because multiple pregnancies in the UK describe only 15.7 out of every 1000 births, and out of the 12,692 multiple births in the UK in 2012 only 226 of them were *not* twins (Multiple Births Foundation, 2014). There is a very similar picture in the US, where in 2012 33.1 of every 1000 births were of twins and 12.4 of every 10,000 triplets or higher (CDC, 2012).

So, what does this mean for global health? A US study released in 2013 in the American Journal of Obstetrics and Gynaecology investigated the comparable costs between multiple and singleton births, and found that twin births cost five times as much as a singleton birth – and triplets or more twenty times that of a single baby (Lemos, 2013). Advances in medicine have given options to women having difficulty in conceiving, but these can often result in multiple births themselves. Clomid (clomifine citrate), for example, stimulates ovulation in women with conditions like Polycystic Ovarian Syndrome (PCOS) – but one in ten women taking it fall pregnant with twins. In addition, in-vitro fertilisation (IVF) often results in the transfer of more than one embryo in order to maximise the chances of implantation. This greatly increased the incidence of multiple births, and given both the costs and health implications involved – one in twelve twin pregnancies will result in stillbirth, miscarriage or disability of one or both babies – the Human Fertility and Embryology Association (HFEA) has issued new guidance to all clinics suggesting single embryo transfer should be preferentially used wherever possible (NHS Choices, 2012).

Compare health provision in maternity services between the UK and Sudan:

When considering the contrasts in such services, it is primarily essential to note the economic differences. Sudan is a country of 34.9 million people, with a GDP as of 2009 of $58.8 billion. The United Kingdom has some 63.4 million inhabitants, and a GDP of $2.44 trillion – significantly more per head than Sudan. In addition, roughly 46.5% of Sudan's inhabitants live below the poverty line, with only 14% of the UK being in a comparable position (NationMaster, 2014).

Given the country's economic status, it is no surprise to find that health services suffer in Sudan as a result. There are just 0.22 qualified doctors for every 1000 population, a tenth that of the UK. Charities such as Médecins Sans Frontières (Doctors without Borders) operate within the country in an attempt to bolster flagging or poorly-equipped health services, but many patients travel far to reach the help they need. MSF delivered 900 babies in 2012 in North Darfur, one of the poorest and most isolated regions of the country, but they are attempting to provide succour for a country whose

maternity services are so poor that there can sometimes be only a single midwife available within the radius of over a day's travel (MSF, 2013).

The United Kingdom provides a rather different story. Every pregnant woman in the UK can expect to see a midwife for the appropriate health checks, and those considered to be higher risk for any reason – prior complications, adolescence or obesity amongst others – will see obstetricians at a hospital clinic (NHS, 2013). The large number of hospitals and higher monetary provision for healthcare in the UK result in a maternal mortality ratio of 8 per 100,000 women. In Sudan, however, that value is 360 of every 100,000 - and given the fresh eruption of violence in the country it is likely that as what fragile infrastructure that exists there is destroyed this value will rise further (World Health Organisation, 2013).

Discuss the relationship between obesity and complicated pregnancies in the local patient population:

In order to fulfil this objective I examined the records of the Lister Hospital, part of the East and North Herts NHS Trust. I focused on deliveries to mothers with a booking BMI of 40 or over - any records with missing information were not included.

There were a total of 306 deliveries with enough detail to be used in the study: 1.96% (6) were to women aged 40 or over, and 1.63% (5) were multiple births.

19 (6.21%) of all deliveries were classed as preterm, 3 of which being twin or triplet deliveries. The rest were term or later, though 16 (5.23%) were 42 weeks or later at delivery and thus would be classed under the adjusted definitions of 'term pregnancies', as suggested by the American Journal of Obstetrics and Gynaecology, as 'late term'.

179 (58.5%) were classed as spontaneous vaginal deliveries, with 61 (19.95%) classed as elective caesarean sections. 46 (15%) were noted to be one of the three categories of emergency caesarean sections. Of these, 37 (80.44%) were classed as category 2 (complications which aren't immediately life threatening, section to be undertaken between 30-75 minutes), with 9 (19.57%) recorded as category 3 (not urgent but early delivery required). 20 (6.55%) of all deliveries were instrumental (7 via Kiwi, 13 using forceps).

Particularly of note are the results relating to blood loss: 66 (21.57%) women suffered a minor haemorrhage of between 500 and 999ml. 15 (4.90%) of women suffered a moderate haemorrhage of 1000 – 1499ml, and 8 (2.9%) experienced a major obstetric haemorrhage (blood loss of over 1500ml). It is worth noting that there is no mention in the records of whether these blood losses are antepartum, postpartum or inter-operative, so attributing these losses to any particular complication is difficult and would be speculative.

7 deliveries (2.29%) were of babies weighing less than 2.5kg and thus meeting the requirements of IUGR. Of these, however, 4 were deliveries of multiple babies and as such many were also of earlier gestation. As a result a lower birth weight would be expected. 55 (17.97%) birth weights were over 4kg, and 12 (3.92%) were over 4.5kg and thus considered macrosomic.

The results indicate that there is an elevated risk of both caesarean section – particularly in women with a BMI over 45 - and haemorrhage with obese mothers along with a high risk of a large baby – which itself presents problems with the second stage of labour. Before it is useable, this data needs expanding to fit the RCOG definition of a high BMI and therefore include any woman with a BMI over 30. Attention also needs to be paid to extra data sets such as diagnoses of gestational diabetes, pre-eclampsia, perineal tears and indications for emergency caesarean, but there is a distinct problem with this – many complications were not recorded for individual deliveries, and items such as indication for caesarean could only be gleaned from the notes of each specific patient. A wider study of all women with a high BMI (over 2500 in the Lister hospital over the two year period examined) will need to involve pulling the notes of each woman and individually identifying risk factors or complications. This would be a large task and absolutely need to involve a team of researchers.

Regardless, should further research support my findings it may be of use to consider further management options – for example, the routine use of cell salvage in caesarean sections of obese women.

References

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