

Two cases of postmaturity-related perinatal mortality in non-local expectant mothers

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We present two cases of postmaturity-related perinatal mortality with delivery at 42 weeks 6 days' and 44 weeks' gestation, respectively. No cause beyond postmaturity was found. Neither induction of labour nor foetal monitoring had been performed despite these gestations going post 41 weeks because of a current 'social obstetrics' phenomenon—non-local expectant mothers coming to Hong Kong from mainland China for delivery.

Introduction

When a standard obstetrics practice is affected by a socio-economic situation, we describe it as a 'social obstetrics' phenomenon. Here we report two cases of postmaturity-related perinatal mortality resulting from a current socio-economic situation in Hong Kong.

Case reports

Case 1

The first non-local expectant mother was 27 years old, gravida 2, para 0, did not smoke or drink alcohol, and gave a history of good past health. This was a planned pregnancy and she had antenatal care in mainland China. Ultrasound examinations done in mainland China at 20, 24, and 32 weeks showed foetal parameters corresponding to her menstrual dates. She arrived in Hong Kong at 35 weeks' gestation and had no antenatal checks from that time onward. In May 2006, she attended the Accident and Emergency (A&E) Department at 41 weeks 3 days for irregular abdominal pain. The foetus was reported to be active with a foetal heart rate of 138 beats per minute detected by foetal pulse detector. She refused to be admitted to the obstetrics ward for observation due to financial constraints. Nine days later, at 42 weeks 6 days gestation, she presented to the A&E Department again complaining of a 'show'. On direct questioning, she reported a paucity of foetal movements that morning and the foetal heart pulsation could not be detected. Intrauterine death was confirmed by ultrasound examination. She went into labour spontaneously. A fresh stillbirth was delivered by normal vaginal delivery. It was a female baby, weighing 3100 g with no gross abnormalities. Investigations for intrauterine death, including a full blood count, C-reactive protein, liver and renal function tests, urate level, glucose level, and autoimmune markers were all normal. Placental pathology showed acute chorioamnionitis, funisitis, and subchorionic intervillitis. There was no placental infarct, calcification, or haematoma. She declined a postmortem examination of the stillborn child.

Key words

Infant mortality; Pregnancy, prolonged;
Socioeconomic factors

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Case 2

The second non-local expectant mother was 37 years old, gravida 3, para 0, an ex-smoker and non-alcohol drinker, with a history of good past health. This was a planned pregnancy and she had some antenatal care in mainland China. An ultrasound examination done in mainland China at 27 weeks' amenorrhoea showed corresponding foetal parameters. She arrived in Hong Kong at 32 weeks' gestation and had no antenatal care from that time onwards. In June 2005, she attended the A&E Department at 44 weeks with a 'show' and irregular abdominal pain. She was admitted to the obstetrics ward and a cardiotocogram showed prolonged foetal heart rate decelerations down to 60-80 beats per minute. An emergency lower segment caesarean section was performed for foetal distress. The liquor was thick and meconium stained. A 3640 g baby girl was delivered with Apgar scores of zero at 1 and 5 minutes. She was given intravenous adrenaline and active cardiopulmonary resuscitation. Her Apgar scores rose to one at 10 minutes, then three at 15 and 20 minutes. Her cord blood pH was 7.24 with a base excess of -7.1 mmol/L. The baby was transferred to the neonatal intensive care unit and put on a ventilator. Intravenous penicillin G and cefotaxime were started. Her neonatal course was stormy, with

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兩個非本地居民準母親的案例：與胎兒過熟有關的產期死亡

本文報告兩個與胎兒過熟有關的產期死亡案例。兩位孕婦分別在懷孕期42週6天和44週分娩，胎兒過熟是唯一產期死亡的起因。雖然兩位孕婦懷孕期已過41週，但並沒有接受催生措施，也沒有監察胎兒的情況。兩宗案例都牽涉到沒有本地居民身份的內地孕婦到香港分娩的數量不斷增加而成為延續至今的社會產科現象。

severe meconium aspiration syndrome, hypoxic ischaemic encephalopathy, convulsions, central diabetes insipidus, and disseminated intravascular coagulopathy. In view of the child's progressively downhill course and poor prognosis, ventilator support was withdrawn with the mother's agreement. The baby died on day 18 after birth.

Discussion

Post-term pregnancy is classically defined as any pregnancy that goes beyond 42 completed gestational weeks.¹ It is well-recognised that post-term pregnancy is associated with an increased risk of perinatal morbidity and mortality, due to uteroplacental insufficiency, meconium aspiration, and intrauterine infection.² The risk of stillbirth increases from 1 in 3000 at 37 weeks gestation to 1 in 1000 at 40 weeks and 1 in 500 beyond 42 weeks.³ A Cochrane meta-analysis suggested that routine induction of labour after 41 completed weeks can reduce the risk of term stillbirth in a normally grown foetus without increasing maternal morbidity.⁴ As a result, many obstetrics units offer routine induction of labour in uncomplicated pregnancies that go beyond 41 weeks. Critics of this approach suggest that it increases the caesarean section rate for failed induction.^{5,6} Nevertheless, in pregnancies going beyond 41 weeks, some sort of foetal monitoring such as cardiotocograms, amniotic fluid measurements, and Doppler studies of the foetoplacental circulation should be offered.^{3,7,8}

These two recent cases of postmaturity-related perinatal mortality illustrate a new challenge faced by obstetricians and midwives in Hong Kong. This phenomenon is known as 'social obstetrics': when a standard obstetric practice is affected by a socio-economic situation. The Hospital Authority (HA) is the major health care provider in Hong Kong, offering Hong Kong residents a full range of medical service at low fees, because the Hong Kong Special Administrative Region government subsidises over 90% of the costs. In recent

years, an increasing number of non-local expectant mothers, who are not automatically entitled to use the Hong Kong public health service, have travelled from mainland China to Hong Kong for delivery for a specific social reason—children born in Hong Kong to mainland Chinese women have the right to stay in Hong Kong. Non-local expectant mothers have to pay much higher fees to use the Hong Kong public health service. They usually come to Hong Kong on a tourist visa near, or at, term, and stay until after delivery. Financial constraints or differences in antenatal care health beliefs mean many do not have antenatal care in Hong Kong. In order to minimise the costs incurred by an in-patient stay for delivery of the baby (at the time these two women delivered, the obstetric package was HK\$20 000 for 3 days and 2 nights' of hospitalisation including delivery + HK\$3300 per extra day), they tend to come to the hospital through the A&E Department, only when there are signs and symptoms of labour, even when they are post-term. The incidence of post-term deliveries in non-local pregnant women is 3.2%, which is significantly higher than the 0.9% in our local pregnant women.⁹ Our two reported cases of perinatal mortality might well have been prevented if the standard obstetric protocols for postmaturity, namely either induction of labour at 41 weeks or foetal monitoring if expectant management is adopted beyond 41 weeks, had not been hindered by this special 'social obstetrics' phenomenon.

Unfortunately, postmaturity-related perinatal mortality is only one example of this new 'social obstetrics' phenomenon currently occurring in Hong Kong. Other cases seen in our department include intrauterine death due to untreated gestational diabetes mellitus, breech/malpresented twins in advanced labour; unknown placenta praevia with massive vaginal bleeding; ignored signs of pre-eclampsia progressing to eclampsia. All these potentially dangerous scenarios could have been prevented if the non-local expectant mothers had proper antenatal care before delivery. Obstetricians and midwives in Hong Kong need to be aware of and prepare themselves to deal with complications arising from this 'social obstetrics' phenomenon. From 1 February 2007, a new system of antenatal care and delivery bookings for non-local expectant women commenced in HA hospitals.¹⁰ They now have to pay HK\$39 000 for an obstetric package covering one antenatal check, confinement, and birth-related hospitalisation for 3 days and 2 nights. Those who have not made bookings and have not had an antenatal check in an HA clinic will be charged HK\$48 000. It will be interesting to study whether this new charging policy will change the last-minute help-seeking behaviour, and thereby reduce the risk of associated adverse obstetrics outcomes in these non-local expectant mothers.

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