Traditional practices and adverse pregnancy outcomes in migrant women

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Abstract

Traditional practices during pregnancy may lead to adverse outcomes in migrant women. Very little is known regarding the efficacy or safety of many cultural practices during pregnancy, and research is required to address this deficiency in knowledge. Greater awareness of traditional practices by health professionals may result in improved pregnancy outcomes in migrant women.

Keywords

Endocrinology, general medicine, complications, perinatal medicine

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Introduction

There are significant differences in the rates of adverse pregnancy outcomes between women born in Australia and women born overseas.¹ Printed and online resources have been developed to address cultural and communication barriers in the antenatal care of migrant women from many countries.² Traditional practices may also lead to adverse pregnancy outcomes. Migrant women, in particular those from a refugee background, may not disclose these practices despite specific questioning. Health professionals should be aware that traditional or cultural practices may cause adverse outcomes in pregnancy. Two illustrative cases are presented.

Case 1

A 21-year-old Ethiopian primigravida at 17 weeks gestation presented with hypokalaemic paraparesis. The patient's serum potassium was 1.9 mmol/L (normal 3.5–5.2), creatine kinase was 2597 U/L (normal <200) and serum magnesium and thyroid function were normal. The patient was normotensive. There was no history of vomiting or diarrhoea. She denied taking any medications or herbal supplements. The patient had been consuming 1–2 L of cola drinks and 2 cups of strong coffee daily, and eating raw meat. She denied geophagia. Prior to pregnancy, serum potassium level was normal. Further biochemical testing excluded Gitelman and Bartter syndromes, renal tubular leak, hyperaldosteronism and pregnancy-induced Cushing's syndrome. There were no previous episodes of myopathy or family history to suggest familial hypokalaemic paralysis. The serum potassium normalised with replacement and the remainder of the pregnancy was uneventful.

Hypokalaemia and rhabdomyolysis in pregnancy has been described with ingestion of large amounts of either cola drinks or caffeine; however, the amount in this case was significantly lower than has been reported to result in myopathy previously. Approximately, 20 cases of hypokalaemic myopathy due to ingestion of clay/soil or baking soda have previously been reported. It is suspected this lady was practising geophagia but was uncomfortable about disclosing this practice.

Case 2

A 24-year-old nulliparous Congolese refugee presented with a random venous glucose of 29 mmol/L (normal 3.6–7.7). On examination she was floridly Cushingoid. Serum cortisol and ACTH were undetectable.

She denied exposure to glucocorticoids other than a skin-lightening cream she had purchased at a local African shop. Analysis revealed the cream contained clobetasol, a potent corticosteroid. The use of topical corticosteroids for skin-lightening has been reported in 25–67% of adult women in western African capital cities, and 69% of third-trimester women attending a standard maternal centre in Dakar.³ The use of potent topical corticosteroids in pregnancy is associated with smaller placental size and a higher rate of low-birth-weight infants.³ Approximately 50 cases of Cushing's syndrome and hypothalamic-pituitary-adrenal (HPA) axis suppression have been reported in adults and children secondary to topical corticosteroid use. Severe hypoglycaemia may occur if exogenous glucocorticoids are withdrawn prior to recovery of the HPA axis.

Discussion

Traditional practices known to be highly prevalent in pregnancy include geophagia, the ingestion of herbal medicines, medicinal plants or salt, and the application of skin-lightening creams. While prevalence rates of these practices have been described in pregnant women in their native communities, information on the rates of these practices in immigrant women is lacking.

Geophagia, the ingestion of earth or soil-like substances such as clay or chalk, has been observed in up to 84% of pregnant women in some African countries.⁴ The worldwide prevalence of geophagia in pregnancy has been estimated at 27.8%. In addition to hypokalaemia, geophagia may be complicated by iron and zinc deficiency, intestinal obstruction or perforation, and parasitic infestations. Hypokalaemia occurs due to clay binding to potassium ions in the intestine resulting in increased gastrointestinal loss of potassium.

The use of skin-lightening creams is particularly prevalent during pregnancy as light skin colour is considered a sign of affluence and prosperity in some communities, particularly at the time of a newborn baby's Christening. As well as high potency corticosteroids, significant active agents in skin-lightening creams include mercury and hydroquinone. In many countries the distribution and sale of

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cream is unregulated. Analysis of 29 products obtained locally in a South African study found that 76% contained illegal or banned ingredients – 45% contained corticosteroids, 41% contained mercury and 38% contained hydroquinone.⁵ Approximately, 700 cases of inorganic mercury poisoning associated with skin-lightening cosmetic products have been previously described.⁶ Studies have shown that prenatal and postnatal mercury exposure may cause permanent neurological damage in children, as well as birth defects. To date the possible effects of the use of mercury-containing skin-lightening products by women of childbearing age on pregnancy outcome and subsequent child health have not been assessed. One case report described unusually high levels of blood mercury in the umbilical cord blood of an infant, whose mother had used a face cream from Mexico found to contain 30,000 ppm mercury (FDA standard <1 ppm).⁷

While approximately 40% of hydroquinone is systemically absorbed following topical use a small study in pregnant women did not show any adverse effects.

The use of herbal medicines in pregnancy is common worldwide. A study of 9483 women in Europe, North America and Australia found that 29.3% of women reported using herbal medicine during pregnancy.⁸ A prospective cohort study in China found that 45% of mothers consumed Chinese herbal medicines (CHM) during pregnancy and the postpartum period.⁹ Similarly, 14% of women who gave birth at a tertiary hospital in Malaysia used CHM during pregnancy. Half of the users did so in the first trimester.¹⁰ The practice was particularly prevalent in those consuming alcohol or women from lower income households. The safety of CHM in pregnancy is unclear due to the limited number of studies, the poor quality of randomised controlled trials, and the possible adulteration of medicines.

The CHM meizitanc is commonly used to assist in weight loss. In two cases, maternal exposure to meizitanc resulted in missed abortion.¹¹ Analysis revealed tablets to contain high doses of sibutramine and trace amounts of xylene, exposure to which is known to have a significant association with spontaneous abortion.

The use of CHM for weight loss has been associated with fatalities or the requirement for liver transplantation.¹² Herbal constituents including usnic acid, ma huang and Teucrium species, as well as adulterants such as sibutramine may cause hepatotoxicity. CHM may also cause thyrotoxicosis due to adulteration with desiccated porcine and bovine thyroid tissue.

The traditional practice of eating kanwa, as well as consuming additional salt and heating the body after delivery may be a provoking factor in the high prevalence of hypertension and peripartum cardiac failure in women in Zaria, Nigeria.¹³

Tropaeolum majus is a medicinal plant commonly used in South America as an antiseptic, diuretic, purgative, antihypertensive and antidepressant. It has been shown to have inhibitory action on the angiotensin-converting enzyme, and cause growth restriction and renal damage after 20 days of gestation in rats.¹⁴

An ethobotany survey in Eastern Ivory Coast found that 90% of pregnant women used medicinal plants during pregnancy.¹⁵ Similarly, 80% of pregnant women in Mali used medicinal plants during pregnancy, principally for treatment of malaria, urinary tract infections and reduction of oedema.¹⁶

Food taboos amongst Ethiopian pregnant women may lead to nutritional deficiencies and anaemia.¹⁷

It is likely that Western health professionals are ignorant of many traditional practices in pregnancy. Engagement with matriarchal figures, midwives and doulas within migrant communities would be valuable in identifying these practices. Many of the traditional medicines and other customs commonly used in pregnancy and labour need to be investigated to determine their efficacy, safety and relevance through research. Health professionals must also be aware of the potential of non-disclosure of traditional practices by migrant women even with specific enquiry.

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Ethical approval

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