



From Uganda: Anaemia, sickle cell

Two papers in this issue and an accompanying editorial deal with aspects of anaemia in Uganda.¹⁻³ In her editorial Sliwa³ notes that the causation of anaemia in developing countries is multifactorial and includes micronutrient deficiencies, chronic worm infections, haemoglobinopathies, cancer and chronic non-communicable diseases such as chronic kidney disease and heart failure. Anaemia is also a major cause of morbidity in malaria, HIV and tuberculosis and is an independent prognostic marker in HIV. In Africa anaemia is particularly common in individuals infected with soil-transmitted helminths and schistosomes. Infection with several parasites is common in poor communities and results in a 5 - 8-fold increase in anaemia.

Mukaya and colleagues report on a carefully conducted, cross-sectional descriptive study of 395 hospital patients, of whom a high percentage (64%) had anaemia. The prevalence was higher among males (65.8%) than females (63.7%). Fatigue, dizziness, previous blood transfusion, lymphadenopathy and splenomegaly were significantly associated with anaemia. The commonest type of anaemia was hypochromic microcytic (34.1%). There was a low prevalence (10.6%) of hookworm infestation, which could be explained by deworming procedures in line with the Ugandan National Anaemia Policy. Given its high prevalence, clinicians should evaluate all patients in emergency wards for anaemia and manage them accordingly.

Anaemia among 157 patients with congestive cardiac failure (CCF) was studied by Kuule, Seremba and Freers. Anaemia in heart failure is complex; its pathophysiology is poorly understood and it typically involves numerous features. The authors found that increasing age and hypertension were significantly associated with anaemia. The prevalence of anaemia among their patients with CCF was high (64.3%) and it was significantly associated with mortality by the end of 2 weeks of treatment.

Sickle cell disease is a haemoglobinopathy responsible for high morbidity and mortality among neonates in developing countries. Okwi and colleagues report on their study of the cost benefit of screening for sickle disease among infants at district health centres.⁴ They conclude that use of haemoglobin electrophoresis at Mulago Hospital is very expensive, though it was sensitive. The sickling method was cheap and sensitive and is therefore recommended as the method of choice.

Chakalaka-induced vasodilatation

Why do some of us break out in a sweat when we have had strong spices with our meal? Some of the answers are provided in the report by Coetzee *et al.* on what they propose as chakalaka-induced vasodilatation in a series of patients with chronic myeloid leukaemia on tyrosine kinase inhibitors (TKIs).

Chakalaka is a popular traditional spicy relish containing chilli, garlic, tomatoes, green chilli peppers, etc. Chillies contain the strongly vasodilatory capsaicin; garlic contains the pungent organosulphur compounds allicin and diallyl disulphide that induce inflammation and pain. Adverse reactions were experienced by patients on TKIs that may be related to the consumption of garlic and chillies, two main ingredients in chakalaka. These subsided after the patients avoided chillies and garlic.

Caesarean section and newborn respiratory morbidity

A caesarean section (CS) performed for the right indication is in the best interests of the mother and/or the baby. However, the indications for elective CS at or near term remain controversial and vary widely. Elective CS rates are increasing worldwide and are particularly high in some countries with private health care. CSs on request before 39 weeks' gestation and/or performed for physician convenience or after incorrect interpretation of dates are unlikely to be in the best interests of the unborn child, mother or family if performed too early.

Smith and Alexander reviewed their own experience of respiratory morbidity related to CS in infants of a gestational age of >37 weeks, who required admission to a private neonatal intensive care unit.⁵ Of the 275 infants of >37 weeks' gestation, 135 (49%) were admitted with one or more of the respiratory-related diagnoses. Of the 135 infants admitted with respiratory-related diagnoses, 96% had been delivered by CS.

CS infants are deprived of natural adaptive physiological responses. They have a higher need for resuscitation in the delivery room and an at least five times higher requirement for ventilator support. Compared with vaginal deliveries, there is therefore an increased likelihood of delivery room morbidity associated with elective CS at or near term.

The authors address issues that should be considered and further debated. They conclude that, whenever possible, CS should not be performed earlier than at 38 weeks' completed gestation, i.e. before 39⁺.

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1. Mukaya JE, Ddunga H, Ssali F, O'Shea T, Crowther MA. Prevalence and morphological types of anaemia and hookworm infestation in the medical emergency ward, Mulago Hospital, Uganda. *S Afr Med J* 2009; 99: 881-886.
2. Kuule JK, Seremba E, Freers J. Anaemia among patients with congestive cardiac failure in Uganda - its impact on treatment outcomes. *S Afr Med J* 2009; 99: 876-880.
3. Sliwa K. The multifactorial burden of anaemia in Africa. *S Afr Med J* 2009; 99: 864-865.
4. Okwi AL, Ocaido M, Byarugaba W, Ndugwa CM, Parkes A. Solubility tests and the peripheral blood film method for screening for sickle-cell disease: A cost benefit analysis. *S Afr Med J* 2009; 99: 887-891.
5. Coetzee MJ, Louw VJ, Gartrell K, Viljoen CD. Chakalaka-induced vasodilatation in patients with chronic myeloid leukaemia on tyrosine kinase inhibitors. *S Afr Med J* 2009; 99: 870-871.
6. Smith J, Alexander RJ. First do no harm: Addressing respiratory morbidity in the newborn and child following elective caesarean section before 39 weeks' gestation. *S Afr Med J* 2009; 99: 866-868.