

Disorder	Co-trimoxazole (232 390 users)			Trimethoprim (266 951 users)			Cephalexin (196 397 users)		
	No of cases	IR/10 ⁵	95% CI	No of cases	IR/10 ⁵	95% CI	No of cases	IR/10 ⁵	95% CI
Liver	12	5.2	3.0-9.0	10	3.8	2.0-6.9	4	2.0	0.8-5.2
Erythema multiforme, Stevens Johnson syndrome/toxic epidermal necrolysis	4	1.7	0.7-4.4	2	0.8	0.2-2.7	2	1.0	0.3-2.7
Renal	1	0.4	0.1-2.4	2	0.8	0.2-2.7	2	1.0	0.3-3.7
Blood	2	0.9	0.2-3.1	1	0.4	0.1-2.1	2	1.0	0.3-3.7

IR=incidence rate.

Table: Risk estimates according to type of disorder and study drug

were substantially lower than those previously reported for flucloxacillin (about 1 per 13 000)² and erythromycin (about 1 per 28 000)³ and similar to the risk for oxytetracycline (about 1 per 49 000)² in studies based on the GPRD that used identical methods.

There were only 5 subjects who developed acute idiopathic blood disorders (2 exposed to co-trimoxazole); all recovered. This low risk is in sharp contrast to the risk of blood disorders (27 per 10 332) associated with sulphasalazine in a study based on the GPRD that used identical methods.⁴ 7 subjects developed erythema multiforme or Stevens Johnson syndrome (4 exposed to co-trimoxazole); all recovered. There was 1 case of toxic epidermal necrolysis (in a recipient of cephalexin). 5 subjects developed acute renal disorders (1 exposed to co-trimoxazole); none were attributed clinically to a study drug. The table summarises the results.

We conclude that the risks for the serious illnesses studied are small for the three study drugs and similar to the risks for many other antibiotics.

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Use of mid-upper-arm circumference for nutritional screening of refugees

SIR—In refugee camps, nutritional anthropometry is used for two quite distinct purposes. First, it is used to provide an epidemiological description of the refugee's nutritional status. Here, a population sample is taken—not all children are measured. Second, it can identify individual children at increased risk of death for inclusion in special programmes—usually referred to as screening. In this case, all vulnerable children need to be assessed. Bern and Nathanail (March 11, p 631) seem to confuse these two purposes. They do not use screening for selection of beneficiaries, but use it only for epidemiological assessment. Although weight-for-height is generally accepted for descriptive epidemiology, it is not necessarily the most efficient for identification of individuals at risk of death, and hence for screening.

Bern and Nathanail conclude that it is not useful to measure mid-upper-arm-circumference (MUAC) as a filter

before weight and height measurement of refugee children, because many of the children who have a low weight-for-height would be eliminated from consideration during the initial screen. As they clearly show, different groups of children are selected as malnourished on the basis of MUAC and weight-for-height criteria; only 39% of younger and 20% of older children with a low weight-for-height have a low MUAC. Thus, MUAC does not function as a valid substitute for weight-for-height; by the same token, weight-for-height does not function as a substitute for MUAC. Which should be the gold standard when screening individuals? If the most meaningful outcome measure is mortality then the predictive value of MUAC has been repeatedly shown to be better than weight-for-height.¹⁻³ Thus, if selection for targeted intervention is the goal of the assessment, and only one measure can be made, then one would predict that more, but different, deaths would be averted if MUAC was the sole criterion rather than weight-for-height. We agree that this is partly because weight-for-height tends to underestimate malnutrition in younger and overestimate malnutrition in older children, relative to MUAC.⁴ However, a selection bias towards the younger children could be an advantage in practice, for they are the most vulnerable. That a substantial number of children selected by MUAC might be classified as only moderately malnourished by weight-for-height might not be important, since moderate and mild malnutrition are associated with the highest absolute number of deaths.⁵

Clearly, different populations are being selected by the two procedures and both are related to mortality; it seems logical, therefore, to use both criteria to select children for special treatment. However, unlike a hospital or research setting, the practical difficulties of making the measurements, recording the results, and calculating the nutritional status for every child in a refugee camp are crucial. MUAC is not only quick and easy to measure but also it is easily interpreted on the spot. Weight-for-height requires at least two measurers to make two different measurements and then comparison of the values with a standard chart or computer calculation to reach a decision about an individual child. MUAC is not only more closely related to mortality, but also is a much more practical measurement than weight-for-height. For these reasons we advocate that MUAC alone is used to screen children in refugee camps.

With severely malnourished children a major difficulty with MUAC, as a selection criterion for admission, is that weight gain (change in weight-for-height) is used to assess progress and weight-for-height is the discharge criterion: it is not appropriate to have different criteria for admission, assessment of progress, and discharge. This difficulty does not arise in a refugee camp setting where very large numbers of children are being selected for supplemental feeding.

In some supplemental feeding programmes all children under 5 years are given extra food. This is almost certainly a much more effective strategy for averting death and deterioration to severe malnutrition than to select on the

basis of measuring every child's weight-for-height: if every child is to be screened for a more selective supplemental feeding programme then use of either MUAC or an absolute weight cutoff (thereby selecting all the young together with the older children who are malnourished), or even an absolute height cutoff (the beneficiaries described by Bern and Nathanail were in fact selected in this way, with a cutoff of 110 cm, and not by weight-for-height), are better strategies than to measure the weight-for-height.²

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SIR—Bern and Nathanail argue that MUAC does not provide an accurate picture of the acute malnutrition rate in emergency settings and that a reliable indication of the nutritional status of the population requires a weight-for-height survey. They base their assertions on the widely held belief that weight-for-height offers the best indicator of acute malnutrition, and show that the two indicators identify quite different sets of children.

The proper way to assess a nutritional indicator to be used in emergencies, however, is to determine how well it identifies children at increased risk of the adverse functional consequences of malnutrition. Several workers have looked

at the ability of various anthropometric indicators to predict mortality and have reached different conclusions from those of Bern and Nathanail. Of three studies that have assessed different anthropometric indicators in terms of their association with mortality, MUAC (or MUAC for age), was consistently one of the best, whereas weight-for-height was consistently one of the worst.¹⁻⁴

One explanation for the low predictive value of weight-for-height in situations of acute nutritional hazard is that it may only detect marasmus. With kwashiorkor, fluid retention can mask what would otherwise be low weight-for-height. This limitation was obvious in data from a population-based survey of 900 children living in Machinga District (Malawi) during the 1992-93 famine. MUAC proved to have much better sensitivity and specificity as a test for oedema than weight-for-height (figure) or even weight-for-age. Another disadvantage of the weight-for-height indicator is that it requires two measurements, each of which has its own margin of error, and these errors are multiplied when the index is calculated, undermining its precision relative to single measurement indices such as the MUAC.

Weight-for-height was originally advocated for theoretical reasons. If, however, its predictive value is limited then it is the use of weight-for-height, not MUAC, that needs to be reassessed for screening nutritionally compromised populations.

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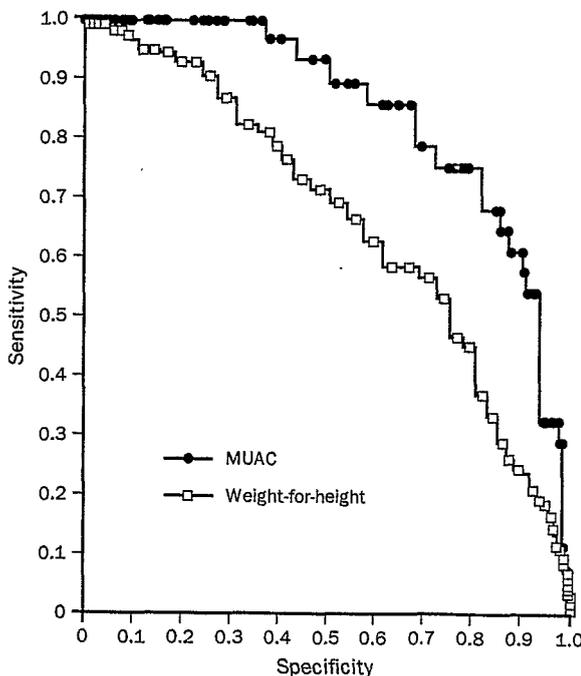


Figure: Sensitivity/specificity of arm circumference versus weight-for-height in detecting kwashiorkor Machinga district, Malawi, 1992.

Lack of association between mitochondrial tRNA^{Leu(UUR)} point mutation and cluster headache

SIR—Shimomura and colleagues¹ postulate a role for a point mutation in the mitochondrial transfer RNA^{Leu(UUR)} gene at nucleotide position (np) 3243 in the mechanism of cluster headache. We were interested in this result because of our findings of abnormalities in brain, muscle, and platelet energy metabolism in migraine and cluster headache patients,² and because we have reported a patient with migrainous stroke and an mtDNA deletion.³ Therefore, we evaluated the presence of the 3243 point mitochondrial tRNA^{Leu(UUR)} mutation in 47 cluster headache patients followed up at the headache centre of the Neurology Institute of Bologna University (table).

The DNA samples were prepared from blood cells as described elsewhere.⁴ Amplified DNA fragments encompassing the mutation site at np 3243⁵ were digested with endonuclease *ApaI* by PCR. The presence of the mutant G, but not of the wild-type A, creates a new *ApaI* restriction site cleaving the mutant DNA into two fragments of 374 and 128 basepairs. None of our patients showed the 3243 point tRNA^{Leu(UUR)} mutation, thus indicating that it has no pathogenic role in cluster headache patients, at least in those of Italian origin.