Mean Total and Differential Leucocyte Counts in Some African Populations Compared with Wintrobe's Norms

Source	Subjects (No.)	Total Leucocytes ($\times 10^9/l$)	Neutrophils ($\times 10^9/l$)	Lymphocytes ($\times 10^9/l$)	Eosinophils ($\times 10^9/l$)	Monocytes ($\times 10^9/l$)
Kampala, Hawgood ¹	Outpatients (88)	5.30 (2.80-9.20)*	2.25 (0.80-5.05)*	2.20 (1.15-3.85)*	0.56	0.27
Nairobi, Kasili <i>et al.</i> ²	Blood donors (152)	5.00 (2.00-10.70)†	2.11 (0.36-5.62)†	2.43 (0.81-5.45)†	0.33 (0.2-1.1)†	—
Lusaka, Ezeilo ³	Blood donors (133)	5.16 (2.60-7.70)†	1.94	2.67	0.45	—
Kampala, Shaper and Lewis ⁴	Blood donors (250)	5.10 (1.90-8.30)*	1.96 (3.20-3.60)*	2.10 (0.74-3.56)*	0.72 (0.2-2.6)*	0.25 (0.0-0.55)*
Bamako, Rougemont <i>et al.</i> ⁵	Unselected adults (555)	5.51 $\pm$ 1.80‡	2.33 $\pm$ 1.37‡	2.47 $\pm$ 0.99‡	0.83 $\pm$ 0.74‡	0.19 $\pm$ 0.20‡
U.S.A., Wintrobe ⁶	Medical students (105)	7.78 $\pm$ 1.46‡	4.30 $\pm$ 1.21‡	2.71 $\pm$ 0.61‡	0.23 $\pm$ 0.17‡	0.50 $\pm$ 0.18‡

*95% confidence limits.

†Range.

‡Mean $\pm$ S.D.Conversion: SI to Traditional Units—W.B.C.: $1 \times 10^9/l = 1000/mm^3$.

from African countries are not rare in Europe this matter seems to be of some practical interest.—We are, etc.,

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Effects of Exertion on Hormone Secretion

SIR,—Strenuous exercise increases plasma renin activity (P.R.A.) to a degree that depends upon the intensity and type of the exercise.¹ We have reported the changes in plasma cortisol and testosterone levels in a group of Finnish sportsmen (30-40 years old) and one 58-year-old Greek who all ran a non-competitive marathon in 210-285 min over the classical course in Athens (29 June 1974, p. 726). As these data suggested a correlation between physical fitness and changes in hormone profiles we investigated whether P.R.A. had undergone similar changes.

The results for P.R.A. obtained by radio-immunoassay² and for plasma osmolality

obtained with a Fiske osmometer are shown in the table. The P.R.A. control values, taken in the upright position, were slightly higher at 1200 hr than at 1600 hr, in accordance with the circadian rhythm of P.R.A.³ After the run P.R.A. increased highly significantly ($P < 0.0005$) except in the fittest participant (no. 12), who ran the marathon in only 180 min and arrived at the finish in exceptionally good condition. Plasma osmolality increased highly significantly after the run ($P < 0.005$). A similar increase of P.R.A. has been found in 22 skiers after a 70-km cross-country ski race.⁴

We believe that the increase in P.R.A. in response to such severe exercise reflects a meaningful reaction tending to restore the balance of body fluids and electrolytes by renin-angiotensin-stimulated release of aldosterone. The lack of rise of P.R.A. in the fittest subject may be due to his larger blood volume, resulting in a smaller reduction of the circulating blood, and to a variety of adaptive adjustments resulting in a lesser degree of sympathetic discharge during strenuous exercise than in the other runners.—We are, etc.,

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Participant No.	Control Samples		After Marathon at approx. 1600 hr
	1200 hr	1600 hr	
<i>Plasma renin activity (ng ml⁻¹h⁻¹)</i>			
1-11	0.89 ± 0.18 (S.E.M.)	0.66 ± 0.11	5.75 ± 0.74 (S.E.M.)
12	1.09	N.D.	1.18
14 (Greek)	N.D.	0.19	4.41
<i>Plasma osmolality (mmol/kg H₂O)</i>			
1-11	285.1 ± 12.5 (S.E.M.)	300.0 ± 3.4 (S.E.M.)	314 ± 1.8 (S.E.M.)
12	305	—	312
14 (Greek)	N.D.	—	320

N.D. = not detected

Rubella in Pregnancy: a Difficult Diagnosis

SIR,—When it can be proved that a woman has been infected by rubella virus in early pregnancy it is usual to recommend termination. We wish to report a case in which it was difficult to make a clinical decision for or against this measure.

The patient had a rubella haemagglutination inhibition (H.A.I.) titre of less than 1/16 in 1973 when in her second pregnancy. In this locality more than 90% of women with such a finding are considered susceptible to infection since they respond serologically to rubella vaccination. She presented again in January 1975 in the 10th week of her third pregnancy, with a history of close and continuous contact with rubella (her own daughter) five weeks previously. Unfortunately there was no recorded evidence that she had been immunized after her second pregnancy. Her rubella H.A.I. titre was 1/32 and the complement fixation (C.F.) titre was 1/10. Identical results were obtained two weeks later. These low titres did not appear to be consistent with recent infection. Nevertheless, she was apparently susceptible at the beginning of this pregnancy (as judged by the 1973 sample), had been in close contact with rubella in the early weeks, and at the 10th week did have measurable antibodies. It seemed possible, therefore, that she had contracted the disease in early pregnancy. Termination was advised. This was performed at the 14th week using a combination of intravenous prostaglandin E_2 and oxytocin. The patient made an uneventful recovery.

The serum collected in 1973 was retested in parallel with a sample taken before termination. The H.A.I. titre of the earlier specimen was confirmed as less than 1/16 and the antibody level of the last serum collected in the pregnancy was again 1/32. Tests for neutralizing antibody and for rubella-specific IgM and IgA were not performed. The fetus and placenta were tested in Vero and RK13 tissue cultures. Rubella virus was not recovered.

This confusing clinical problem re-emphasizes the need for puerperal immunization of "susceptible" women. This may be overlooked very easily when a patient is discharged early in the post-partum period, as happened in this case. It must be appreciated that a laboratory handling large numbers of antenatal sera each week selects women most likely to benefit from post-partum immunization only by employing a screening dilution of serum that will discriminate between those who are "certainly immune" and those who are "likely to be susceptible." Women whose antibody titres lie close to the borderline are reported as susceptible. A few women have low antibody levels and have recordable H.A.I. titres of less than 1/16 but are in fact immune.

In retrospect it seems likely that a non-infected pregnancy was terminated, but we are unable to explain with certainty the rising titre between 1973 and 1975. Such changes are not caused by other infections or by pregnancy. It is possible that the patient was immunized by her family doctor after her second pregnancy (she changed doctors at this time and there was some confusion about postnatal care). The results could be due to slight variations in samples collected from an immune individual with very low levels of antibody (possibly boosted by close contact with her daughter's uninvestigated illness) or from a subclinical infection occurring between the second and third pregnancies.

Different interpretations of the laboratory results in this situation caused considerable difficulty. We should be interested to know

if similar problems have been encountered elsewhere.—We are, etc.,

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Deaths from Non-accidental Injuries in Childhood

SIR,—Publicity given to speculative estimates running as high as 750 a year of the number of small children battered to death by their parents has led us to examine the Registrar General's statistics for fatal accidents in children under 5 years.

The Registrar General's statistics for England and Wales show that for the latest year for which figures are available, 1972, a total of 80 deaths in children under 5 were classified as non-accidentally inflicted. A further 696 children died as a result of accidents other than traffic accidents. In 21 of these deaths it was not possible to determine whether injuries had been purposely inflicted. While it is, of course, probable that there were fatal cases of deliberate injury where no suspicion at all was aroused it seems unlikely that all—or even the majority—of these 696 cases of fatal accidents were hidden cases of parental violence, more especially in view of the atmosphere of heightened suspicion which has prevailed since the end of the sixties.

Unless it is postulated that non-accidental injuries are included in other non-accident categories such as "sudden death (cause unknown)," the number of fatalities resulting from non-accidental injury in the under-5s must be presumed to lie somewhere between 80 and 776 cases in 1972. It is probable that it is considerably nearer the lower figure than the higher. Thus to reach the estimate of 750 child-abuse deaths a year one may need to conclude that all recorded accidental deaths are in fact non-accidental.

There has, in fact, been a decline in the overall number of children dying from accidents other than traffic accidents over the five-year period from 1968 to 1972 (see table). However, the percentage of these which were attributed to definite or possible non-accidental injuries has remained fairly constant whereas the percentage of children dying from injuries in the "undetermined" category has fallen, presumably reflecting the atmosphere of heightened suspicion.

Clearly child abuse is a very important problem. However, such acts of violence of this nature in society can be dealt with adequately only if the nature and extent of the problem is fully understood. The diagnosis of child abuse as a cause of death can be extremely difficult, but exaggerated estimates could hinder the development of a full understanding and distort attempts to help these tragic families.—We are, etc.,

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Tolamolol in Treatment of Angina Pectoris

SIR,—In reply to Dr. C. S. Good's letter (7 June, p. 560), bradycardia is a well-documented side effect of any beta-blocker and was severe in only one of our patients. He responded to a reduction in dosage and is well two years later on tolamolol 50 mg three times a day. Patients with angina are at risk from cardiac infarction whether or not they are taking beta-blockers.

Dr. Good's calculations are unacceptable. In order to get meaningful annual mortality figures a large number of patient years is needed. The actual number of patient years on which Dr. Good is basing his figures is only eight. Of the 42 patients who completed our initial study, each has been carefully followed up for two years. One has died while not taking beta-blockers and 41 are well, of whom 35 are on tolamolol. Even including the original deaths, our mortality was of the order of 4%. The fallacy in Dr. Good's calculation is the assumption that tolamolol was solely responsible for all deaths, irrespective of any other factors, including other drugs and the disease for which the patient was being treated. All events over a 10-month period cannot be condensed into a two-month period and then multiplied by six in order to produce an annual mortality unless that two-month period is responsible for everything.

As the trial was a comparative one we had no alternative but to exclude the four patients who did not complete the trial.

It both surprises and puzzles us that Dr. Good did not discuss with us his calculations which purported to show the startling figure

of 41.5% as our annual mortality, particularly because as medical advisers to Bayer Pharmaceuticals he is so well known to us.—We are, etc.,

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Abortion (Amendment) Bill

SIR,—You have been taken to task by a number of correspondents (7 June, p. 558; 14 June, pp. 613 and 620) for your leading article "A Criminal Approach to Abortion" (17 May, p. 352). May I present a contrary view?

I cannot contemplate with equanimity the birth of 70 000 unwanted babies per annum in England and Wales. This is the figure by which it is considered by the sponsors of the Abortion (Amendment) Bill that the present 110 000 terminations will be reduced if the Bill becomes law. In practice the figure would be less than this as it has been found in this country before 1967 and in other countries that restrictive legislation leads only to an increase in illegal and self-induced abortions, with the consequent increase in mortality and morbidity. Last November the Minister of Health for France, Mme. Simone Veil, reported to the National Assembly that 300 000 women were having abortions outside the law every year.

It must not be forgotten that in England and Wales in 1960 there were 62 deaths associated with abortions; in 1973 there were 12. In 1965 the London Emergency Bed Service recorded 5731 admissions in connexion with abortions and in 1974 there were 1941.

All too often it is assumed that those who request, not demand, abortion are the feckless and the irresponsible members of the community. While this group contributes a quota, the great majority of women come to request an abortion as a result of a failure of contraceptive technique. Not everyone has found a pill to suit them and all other methods have a varying but definite failure rate.

May I suggest that we devote our efforts not to encouraging more restrictive legislation but to the discovery of improved methods of contraception and to inculcate into men in particular a more responsible attitude in human relationships.—I am, etc.,

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Deaths in Under-5s from Non-transport Accidents (Office of Population Censuses and Surveys 1968-72)

	1968	1969	1970	1971	1972
Accidental Injury					
Accidental poisoning	37	30	30	29	25
Accidents caused by fires and flames	145	121	103	97	111
Accidents caused by scalds and corrosive liquids	7	14	14	10	7
Inhalation and ingestion of food and other objects	265	292	255	224	168
Accidental mechanical suffocation	196	190	153	125	100
Accidental drowning	96	103	87	103	108
Accidental falls	70	74	56	68	58
Hunger, thirst, or neglect	44	27	42	28	41
Other	64	84	56	56	57
Total	924	935	796	740	675
Suspected and Definite Non-accidental Injury					
Fatal injury undetermined whether purposely inflicted* (% of grand total)	49 (4.6)	51 (4.8)	31 (3.4)	28 (3.3)	21 (2.7)
Homicide and fatal injury purposely inflicted	82	77	76	68	80
Total (% of grand total)	131 (12.4)	128 (12.0)	107 (11.8)	96 (11.5)	101 (13.0)
Grand Total	1055	1063	903	836	776

*Included in fatal non-traffic accidents in O.P.C.S. figures.

SIR,—May I, as a gynaecologist who aborts the majority of patients referred to him for that purpose, point out two fundamental errors in your leading article (17 May, p. 352)?

Firstly, you state that under an amended act "in assessing an individual case the question would no longer be what was best for the patient" (my italics). Legally this is not the situation now; quite different criteria are laid down by the 1967 Act.

Secondly, you quote the Lane Report as authoritatively recommending that legal grounds for termination should not be restricted, when you must be perfectly well aware that the Lane Committee was specifically required (by its terms of refer-