Our results also suggest that treatment with potassium lowers serum cholesterol concentrations, which will be an added advantage. Hence, moderate daily supplements of potassium could be a valuable alternative to pharmacological methods for controlling mild hypertension, especially in those who are not willing or able to restrict salt intake. Retrospective data suggest that a high intake of potassium may decrease mortality associated with stroke,³⁰ and a long term study to explore the added advantages, if any, of treating hypertension with potassium is worthwhile.

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Transmission of hepatitis B virus by blood transfusion in Yaounde, Cameroon

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Prevalence of markers of hepatitis B virus and alanine aminotransferase activities among 76 patients with sickle cell disease and 62 controls. Values are numbers (percentages) of patients

Patients	Mean age (years)	Positive for hepatitis B surface antigen	Positive for antibody to hepatitis B surface antigen	Alanine aminotransferase activity (IU/l)		
				≤55	56-100	>100
Sickle cell disease	8.5	9 (12)	23 (30)	71 (93)	1 (1)	4 (5)
Controls	7.7	7 (11)	19 (31)	56 (90)	4 (6)	2 (3)
Total	8.1	16 (12)	42 (30)	127 (92)	5 (4)	6 (4)

for markers of hepatitis B virus; the last transfusion had been given at least four months before the study. Control patients (age range 1-16 (7.7) years) were recruited from consecutive children who presented at the hospital day clinic with minor ailments such as malaria and minor cuts; they did not have sickle cell disease and had not received transfusions. Consent from their parents or guardians was sought before blood samples were obtained. They were matched for age and social state with the children with sickle cell disease. The control group comprised 62 children as 14 children with sickle cell disease could not be matched.

Serum samples were tested for hepatitis B surface antigen and antibody to hepatitis B surface antigen (Hepanostica kit, Organon Teknika, Turnhout, Belgium). Alanine aminotransferase activity was measured by a colorimetric method (BioMérieux, Marcy-l'Etoile, France); normal values for Yaounde are 5-55 IU/l. Data were analysed with the χ^2 test or Fisher's exact test as necessary with a Statworks program.

The table gives the results obtained in the two groups of children. Hepatitis B surface antigen was detected in nine (12%) of those with sickle cell disease and seven (11%) of the controls ($p=0.8677$) and antibody to hepatitis B surface antigen in 23 (30%) and 19 (31%) respectively ($p=0.8907$). Five of the patients were positive for both the antigen and the antibody compared with one of the controls. Thus at least 27 (36%) of the children with sickle cell disease had been in contact with hepatitis B virus (95% confidence interval 25 to 47%) compared with 25 (40%) of the controls (28 to 53%). Thus the overall rate of exposure to the virus was about 38% (52/138; 29 to 46%) and the

relative risk for the patients with sickle cell disease was 0.9.

The two groups of children were categorised according to whether their alanine aminotransferase activity was 0-55, 56-100, or >100 IU/l (table). None of the differences in the proportions in the three categories between the two groups was significant ($p>0.1$ in all categories, Fisher's exact two tailed test).

Comment

These findings indicate that exposure to hepatitis B virus is not increased in children with sickle cell disease who have received several transfusions of unscreened blood. This may be either because most donors have been infected early in life and so tend not to be infectious¹ or because a high proportion of the recipients (a third in our study) have also been exposed to the virus and therefore have a reduced risk of being infected by the transfusion. There was little indication, based on alanine aminotransferase activity, that transmission of hepatitis C would be of concern in either of the groups.⁴

Thus in Cameroon, for the time being, screening

blood for hepatitis B surface antigen before transfusion cannot be justified.^{2,5} A surveillance scheme should, however, be set up to monitor the incidence of hepatitis after blood transfusion and the relevance of this guideline.

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Aetiological importance of ovulation in epithelial ovarian cancer: a population based study

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One of the principal theories on the aetiology of ovarian cancer suggests that incessant ovulation induces malignant transformation by traumatising the ovarian epithelium.¹ This hypothesis agrees with the epidemiological studies that show an increased risk of ovarian cancer in nulliparous women and in women with extended ovulatory life spans.² Similarly, suppression of ovulation and the reduction in the total number of times that ovulation occurs in women taking the contraceptive pill, those who have repeated pregnancies, and those who breast feed are associated with a reduced incidence of ovarian cancer.^{2,3} In women ovulation occurs significantly more often in the right ovary (65%), and a similar phenomenon occurs in rhesus monkeys.⁴ Thus if ovulation was aetiological important in epithelial ovarian cancer the disease would be expected to arise more commonly in the right ovary.

Patients, methods, and results

Grampian region has a stable population, and all new cases of ovarian cancer are registered with the gynaecological oncology unit by the Grampian oncology research project. All women with ovarian cancer have separate standardised case records, and I used these in a population based study to assess the proportion of epithelial ovarian cancer arising in each ovary.

From January 1983 to June 1988, 220 patients with ovarian cancer were registered. Six were excluded because they had non-epithelial ovarian cancer, leaving 214 cases for analysis. The mean age of the group was 60 (range 21-89). Forty eight patients had stage I disease, 31 stage II, 84 stage III, and 51 stage IV.

Significantly more tumours were found on the right side than on the left (59% v 41%), the 95% confidence interval for tumours on the right being 51% to 67%

(table). There was no difference in age distribution or the distribution of epithelial subtypes between the patients with right sided tumours and those with left sided tumours. The distribution of stage was, however, significantly different ($\chi^2=5.13$, $df=1$, $p<0.05$). Altogether 60% (38/63) of the patients with left sided tumours presented with disease at an early stage (stages I and II). In contrast, 58% (53/91) of those with right sided tumours presented with disease at a late stage (stages III and IV).

Comment

To my knowledge this is the first study to show that epithelial ovarian cancer arises more commonly in the right ovary. This finding, together with the evidence that ovulation occurs more commonly in the right ovary, supports the epidemiological data implicating incessant ovulation in the pathogenesis of epithelial ovarian cancer.^{1,3,4} It also lends support to Fishel's and Jackson's concern about the potential risk of ovarian cancer from the excessive stimulation of follicles associated with assisted fertility, when the number of ovulating follicles in a single stimulated cycle may be equivalent to the product of up to two years of natural cycles.⁵

The incidence of and mortality from ovarian cancer, unlike those associated with gynaecological malignancies, are rising. The current methods of potent follicular stimulation are unlikely, however, already to be having an adverse effect as they have been widely available for only the past five years. If ovulation is aetiological important in epithelial ovarian cancer the proliferation of superovulation would be expected to lead to a shift to the left in the age related incidence of and mortality from the disease.

The findings of this study depend on the assumption that in bilateral disease the side with the larger tumour is the side from which the tumour developed. Although this seems a reasonable assumption, it is not supported by any direct evidence. It is difficult, however, to explain why in bilateral disease the right ovary is more commonly larger than the left. The large number of tumours in this study for which the side of origin was undetermined can be explained by the natural course of this disease; the side was truly indeterminable.

The observation that patients with tumours of the left ovary present at an earlier stage than those with

Side of origin of epithelial ovarian cancer in 214 women

Side of origin of tumour	No
Right unilateral	57
Left unilateral	45
Right dominant (bilateral)	34
Left dominant (bilateral)	18
Undetermined	60

For right unilateral and right dominant (bilateral) v left unilateral and left dominant (bilateral) $Z=2.2561$, $p<0.05$.