medium containing blood. For this reason we preferred to test our strains after growth on blood agar base. Precise details of Severin's chromogenic cephalosporin substrate method were not stated. To the best of our knowledge, antibiotic therapy had not been given to the four patients from whom β-lactamase producing strains were isolated. Clearly, the possibility of transfer of plasmids determining β-lactamase production between campylobacters and other intestinal bacteria deserves consideration.

EP WRIGHT
Public Health Laboratory,
Luton and Dunstable Hospital,
Lewsey Road,
Luton LU4 0DZ
MARGARET A KNOWLES
Public Health Laboratory,
Fazakerley Hospital,
Liverpool L9 7AL

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Reference standard for packed cell volume

In a recent issue (*J Clin Pathol* 1980;**33**:1) the International Committee for Standardization in Haematology presents a recommendation for a reference method for determining packed cell volume (PCV) of blood. I feel that there has been a significant omission in that the committee does not specify the proportion and type of anticoagulant to be used. Although trapped plasma may increase PCV, the effect of the anticoagulant may offset this by decreasing the volume of the individual red cell.

Brittin *et al.*[1] studied the effect of excess disodium EDTA and demonstrated that excess EDTA shrinks red cells in proportion to the excessive concentration of anticoagulant. However, this error, due to excess anticoagulant, was not produced when the haematocrit was determined by the Coulter Counter Model S.* It has been our experience, in an unpublished study comparing 1500 duplicate pairs of haematocrit values done by the microhaematocrit technique and by the Coulter Counter Model S, that the microhaematocrit was one unit lower than the haematocrit as determined by the Coulter Counter Model S. We feel that this is probably due to excess EDTA, which overcompensates for the increased PCV created by excess plasma.

JOHN V PETRUCCI
Department of Pathology,
School of Medical Technology,
Mercy Hospital Inc,
301 Saint Paul Place,
Baltimore, Md. 21202,
USA

Reference

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*Coulter Electronics, Inc, Hialeah, Florida, USA

Dr England replies as follows:

The publication by the International Committee for Standardization in Haematology Expert Panel on Blood Cell Sizing was intended as a reference standard for determining packed cell volume.

Dr Petrucci's comments are, of course, quite valid, but the panel's view is that conditions of anticoagulation, etc, are more relevant to the measurements of the PCV in routine practice. It is the panel's hope to have a further publication on a selected method which would be more relevant to the routine application.

JM ENGLAND
Pathology Laboratory,
Haematology Department,
Watford General Hospital,
Watford, Herts WD1 8HB

Rotavirus infection

We were very interested to read the paper by Cubitt and Holzel (*J Clin Pathol* 1980;**33**:306) about an outbreak of rotavirus infection in a long-stay ward of a geriatric hospital. We have recently seen a similar outbreak.

Over the period 25 January to 14 February 1980 in one rehabilitation ward of the geriatric service, 10 out of 14 women and 2 out of 4 men developed diarrhoea, accompanied in some cases by vomiting. The majority of patients on this ward occupy single rooms but there is a common day area. Three female members of staff also developed diarrhoea.

The average age (± SD) of the 12 symptomatic patients was 85·1 (± 6·7) years. Stool specimens from 11 of them were examined and salmonella, shigella, campylobacter, and enteropathogenic *Escherichia coli* were not isolated. Rotavirus particles were, however, seen on electron microscopy in 5 of the 11 (45·5%) cases; corona virus was seen in one. No virus-like particles were seen in stool samples obtained from the six asymptomatic patients.

These findings support the suggestion of Cubitt and Holzel that rotavirus should be considered as a possible cause of outbreaks of diarrhoea in elderly patients in longer stay wards.

I WANDLESS
VM IONS
J GRIMLEY EVANS
Department of Medicine (Geriatrics),
and the Public Health Laboratory,
Newcastle General Hospital

Pseudoleptospires in blood culture

We noted with interest the observation by Rahman and Macis[1] that pseudoleptospires could be identified when blood cultures from healthy humans were examined under dark-ground microscopy.

We have observed the presence of artefacts similar in all respects to those described by these authors when whole blood samples from normal, healthy guinea-pigs, hamsters, mice, and chickens have been submitted to direct dark-ground examination. Furthermore, the same type of spiral filaments have invariably been observed when fluid from freshly prepared or incubated suspensions of liver and kidney tissue from these same animals have been similarly examined. It would thus seem likely that such artefacts would be found in corresponding preparations from other animal species as well as man. Although these pseudoleptospires can usually be fairly easily differentiated from the true leptospire by an experienced worker, we concur wholeheartedly with the view that a diagnosis of