

Letters to the Editors

namely, the need to ensure that sterility is maintained and evaporation avoided. It follows that material offered in screw-capped bottles is unreliable and does not conform to the specifications. We wish to draw the attention of those working in haematology departments to this matter.

SM LEWIS, *Organiser,*
General Haematology Quality Assurance
 NK SHINTON, *Chairman,*
British Committee for Standards in Haematology

Reference

¹ International Committee for Standardization in Haematology. Recommendations for reference method for haemoglobinometry in human blood (ICSH Standard EP 6/2: 1977) and specifications for international haemoglobinocyanide reference preparation (ICSH Standard EP 6/3: 1977). *J Clin Pathol* 1978;31:139-43.

Hydatid disease in mid-Wales

Although there are comparatively few deaths from hydatid disease in Wales, it has been suggested that this small number may be the tip of an iceberg.¹ The disease is not notifiable so it is difficult to obtain accurate figures as few surveys have been undertaken.

Recent local discussion has therefore prompted us to report previously unpublished work on individuals from rural and urban parts of the Principality.

Volunteer blood donors, residents of old people's homes, and local authority employees were involved. All were well, and there was no clinical evidence of hydatid infection. A small blood sample was collected from blood transfusion volunteers at the same time as the blood for transfusion was taken and transported to the laboratory. Sera from individuals (from old people's homes and from county council offices) who had taken part in studies of influenza vaccine^{2,3} were also used.

The complement fixation test⁴ was performed on all specimens. The antigens used comprised hydatid cyst fluids obtained under sterile conditions from cysts in sheep at the Cardiff abattoir. At the laboratory, fluids containing many scolices were centrifuged at 1500 rpm for 10 minutes. Merthiolate 1:10 000 was added to the supernatant fluid which was then stored at +4°C until needed. The antigen was standardised by the usual chessboard technique with individual sera from proven human cases of hydatid disease; 2½ units (MHD) of complement were used. Fixation was allowed to take place at 4°C overnight. The optimal dilution of hydatid fluid was noted, and a dilution suitable for use was thus selected.

The results are shown in Tables 1 and 2. It can be seen that overall only a small number of positive results were obtained and that the titres were low. In only one case was a titre of 1:8 obtained.* Individuals in rural areas, however, had a larger percentage of positive results than those in urban communities. Among the latter there were more positive results from elderly individuals (in old people's homes) than from those in the younger age groups (from Cardiff County Hall).

The results suggest that there is more evidence of contact with *Echinococcus granulosus* in mid-Wales than in urban areas of the Principality. Previous work, however, indicates that this effect is more striking in the farming community⁵ or among those who knew of the disease from personal experience¹ than in the general rural population as sampled here. Further surveys may establish a more precise incidence among the latter.

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References

¹ Clarkson MJ. Hydatid disease in Wales: 2. Eradication. *Vet Rec* 1978;102:259-61.
² Howells CHL, Evans AD, Vesselinova-Jenkins CK. Effect of two doses of influenza vaccine in stimulating antibodies in volunteers. *Lancet* 1973;1:1436-8.
³ Howells CHL, Vesselinova-Jenkins CK, Evans AD, James J. Influenza vaccination and mortality from bronchopneumonia in the elderly. *Lancet* 1975;1:381-3.
⁴ Bradstreet CMP, Taylor CED. Technique of complement fixation test applicable to the diagnosis of virus diseases. *Monthly Bull Minist Health* 1962;21:96-104.
⁵ Bradstreet CMP. A study of two immunological tests in the diagnosis and prognosis of hydatid disease. *J Med Microbiol* 1969;2:419-33.

Table 1

Centre	Specimens examined		Percentage
	Total	Positive	
<i>Urban</i>			
Cardiff County Hall	248	2	0.8
Cardiff Old People	125	3	2.4
Pembroke	255	5	1.96
<i>Rural</i>			
Machynlleth	72	4	5.5
Newcastle Emlyn	138	8	5.7
Llanidloes	81	4	4.9
Total	919	26	2.82

Table 2

Titre	Cardiff County Hall	Cardiff old people's homes	Machynlleth	Llanidloes	Newcastle Emlyn	Pembroke
1:2	2	3	4	2	7	4
1:4				1	1	1
1:8				1		
Total	2	3	4	4	8	5

*According to Bradstreet,⁵ a low titre of antibody may occur in human infection if the cyst is deficient in scolices and thus in the antigen contained therein. Low titres may also occur if the cyst is surrounded by fibrous or calcified tissue preventing the escape of antigen into the circulation.