⁶ Noren I, Blomback M, Fridell E, Wallinder U. Vacutainer sampling for blood coagulation assays. *Scand J Clin Lab Invest* 1978;**38**:63-8.

⁷ Cummings J. Evacuated tubes for monitoring heparin treatment (Letter). *J Clin Pathol* 1981;**34**:939-40.

Suppressor T cell activity and antibodies to alcohol altered hepatocytes

Professor MacSween and his colleagues have described antibodies to alcohol altered rabbit hepatocytes in the sera of patients with alcoholic liver disease.^{1,2} This finding suggests an immunological mechanism in the pathogenesis of alcoholic liver disease. Recently, it has been postulated that a decrease in suppressor T cell activity may contribute to the abnormal immune response found in alcoholic hepatitis and alcoholic cirrhosis.³

To investigate the contribution of cellular immunoregulation in the production of antibodies against alcohol altered hepatocytes we studied the suppressor of T cell function and the presence of antibodies to alcohol altered rabbit hepatocytes in 78 alcoholic patients with or without liver disease and in 35 healthy controls. The suppressor cell activity was induced by concanavalin A and measured by the inhibition of mitogen blast transformation. The antibodies to alcohol altered rabbit hepatocytes were investigated by indirect immunofluorescence with hepatocytes isolated from rabbits previously treated with alcohol.

Antibodies to alcohol altered rabbit hepatocytes were shown in the sera of 87% of patients with alcoholic hepatitis, 50% of patients with inactive cirrhosis, 26% of the alcoholics without liver disease, and 4% of the controls. There was also a significant reduction in suppressor T cell activity in patients with alcoholic hepatitis when compared with the control group ($p < 0.001$). No relation was found, however, between the presence of alcohol altered rabbit hepatocyte antibodies and the reduction in suppressor T cell activity.

This study suggests that these phenomena are unrelated and are probably due to independent underlying causes.

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References

- ¹ MacSween RNM, Anthony RS, Farquharson M. Antibodies to alcohol-altered hepatocytes in patients with alcoholic liver disease. *Lancet* 1981;ii:803.
- ² Anthony RS, Farquharson M, MacSween RNM. Liver membrane antibodies in alcoholic liver disease. II Antibodies to ethanol-altered hepatocytes. *J Clin Pathol* 1983;**36**:1302-8.
- ³ Kawanishi H, Tavassolie H, MacDermatt RP, Sheagren JN. Impaired concanavalin A-inducible suppressor T-cell activity in active alcoholic liver disease. *Gastroenterology* 1981;**80**:510.

Continuous marker test for fat absorption

Teh Lip Bin *et al*¹ have provided further evidence of the value of the single sample test for stool fat using copper(I)thiocyanate as marker, while recognising that the test needs further development. One simplification would be to give the daily oral dose of marker as 1 mmol (121.6 mg; Koch-Light Laboratories, please note), containing 1 mmol of copper; thus the awkward 1.17 factor in their calculation would become unnecessary.

There is a printing error in the paper, however, and 1.17 should be 1.97.

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- ¹ Teh Lip Bin, Stopard M, Anderson S, Grant A, Quantrill D, Wilkinson RH, Jewell DP. Assessment of fat malabsorption. *J Clin Pathol* 1983;**36**:1362-6.

Selective Kirchner medium in the culture of specimens for mycobacteria

Mitchison *et al*¹ have recommended a combination of two Löwenstein-Jensen slopes, (one with and one without pyruvate) and a selective Kirchner medium as the most efficient procedure for isolating *Mycobacterium tuberculosis* from specimens other than sputum.

We would like to record our experience of using this system in the examination of 2471 clinical specimens (including sputum) between 1981 and 1983. The media used were Löwenstein-Jensen (LJ); Löwenstein-Jensen with 0.5% sodium pyruvate (LJ+P); liquid Kirchner (NSK); and selective liquid Kirchner (SK). All

media were freshly prepared in the laboratory according to the formulation of Marks.² The SK medium contained 1 ml calf serum and the same antibiotics as those used by Mitchison *et al*, although the concentrations used were different in some cases (amphotericin 10 mg/l, trimethoprim 15 mg/l, polymyxin B 200 units/l, and carbenicillin 50 mg/l). Specimens were inoculated into the SK medium without prior decontamination. Before inoculation into any other media, however, they were treated by a modified Petroffs technique.³ All cultures were incubated at 37°C for 6 weeks and examined weekly for evidence of growth. At the end of 6 weeks, the NSK and the SK media were subcultured to LJ+P slopes and incubated for a further 4 weeks.

The total number of specimens examined by us (2471) was comparable to that examined by Mitchison *et al* (2949) but the distribution of the various types of specimens was rather different. For example, sputa accounted for 24.6% of our specimens but were not included in the study by Mitchison *et al*, while the figures were 16% and 30% respectively for pleural fluids and 32% and 45% respectively for urine samples. In our series a positive ZN film was shown in 49 specimens (1.9%) as opposed to 22 (0.7%) of the specimens examined by Mitchison *et al*. The figures for positive cultures were 55 (2.3%) and 52 (1.8%) respectively. We also found the SK medium to be of value in increasing the yield of positive cultures above that obtained with use of LJ and LJ+P media. In our case this represented 11 further positive cultures (an increase of 20%). This is less than the 36% increase obtained by Mitchison *et al*, but the difference may be attributable to the variation in specimen types and the higher incidence of ZN positive specimens in our series.

The table shows the number of positive cultures from the various types of specimens in relation to the culture media used. Of the seven isolates obtained only from SK medium, the distribution by specimen types was urine (2), sputum (2), cerebrospinal fluid (1), pleural fluid (1), and brain tissue (1). No positive results were obtained in the other media in those cases where a negative result was obtained with SK medium.

We believe that the benefit of incorporating SK media into routine procedure is considerable. The medium has been used successfully without prior decontamination of specimens and the procedure does not greatly increase laboratory costs or work