Avoidance of protein precipitation and bilirubin interference without resort to complex equipment is a considerable advantage. The relation between pH and nitrite is in agreement with results obtained using different methodology.1,2

In conclusion, the suggested role of nitrite in human gastric cancer has led to a series of studies on gastric juice nitrite. We believe that the method described provides a simple and rapid analytical technique suitable for performing such studies.

References


Letters to the Editor

Effect of an evacuated blood collection system on coagulation screening tests

An evacuated blood collection system for routine blood sampling is now being introduced into many British hospitals as a labour and cost saving technique. The use of these evacuated tubes for coagulation studies, however, has been severely criticised and even condemned.1,2 In most cases it is not convenient or desirable for a hospital to have to maintain a second routine blood taking method just for coagulation investigations. We have therefore compared samples drawn with venous cannula and syringe with those obtained by an evacuated tube technique.

Blood specimens were collected from 30 apparently healthy adult volunteers and from 19 patients regularly attending an anticoagulant clinic, who were selected at random. Venous blood was obtained by clean venepuncture with a 21 G butterfly needle (Argyle; St Louis, USA) and a disposable polystyrene syringe. Nine volumes of blood were added to one volume of 0-105 M trisodium citrate in a polystyrene plastic tube (Brunswick; Sherwood Medical, Co Antrim, N Ireland). Blood was also drawn through the same 21 G butterfly by means of a multiple sample luer adapter into a sterile siliconised evacuated tube (Vacutainer; Becton Dickinson, London) containing 0-105 M buffered sodium citrate. The present study was performed with one batch of Vacutainer tubes, no 676624, lot no E 114, before their expiry date. The blood was immediately centrifuged at 2000 g for 15 min and the platelet poor plasma was tested within 60 min of venesection. Both types of tubes remained stoppered until tested. The thrombin and prothrombin times (using the Manchester comparative reagent)3 and the activated partial thromboplastin time (APTT) with kaolin4 were measured in duplicate on each sample by standard manual techniques. The differences between the results of the three tests performed on plasma obtained by the two sampling techniques in the normal and anticoagulant groups are shown in the Table.

The evacuated tubes gave an acceptable correlation with the plastic tubes for the prothrombin time and thrombin time in both the normal and anticoagulant groups; but there was a significantly longer APTT with the evacuated samples in both groups (p < 0.001). The lengthening of the APTT ranged up to 4 s in the normal group and 7 s in the anticoagulant group. This was sufficient to make six of the 30 normal volunteers’ APTTs abnormal as defined by our laboratory range. Previous reports using evacuated Vacutainer tubes have shown a shortening of the APTT related to an old stopper formulation containing isoprene5 and prolongation of the APTT after storage of samples in unstoppered tubes before testing.6 We used evacuated tubes with neobutyl rubber stopper formulation7 and performed all the tests from stoppered tubes. The precise cause of the variable prolongation of the APTT which we observed remains uncertain, but it may result from adsorption or inactivation of intrinsic contact coagulation factors.

With several commercial evacuated tubes for blood collection now being widely introduced into hospitals in the UK it is important that their effects on the coagulation system are compared with the standard syringe and polystyrene plastic tube method before they are considered for routine use.

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References

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. 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.

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 and 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.

References


Continuous marker test for fat absorption

Teh Lip Bin et al have provided further evidence of the value of the single sample test for stool fat using copper(I) iodinate 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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Reference