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False-Positive Result Provided by Rapid Heterophile Antibody Test in a Case of Acute Infection with Hepatitis E Virus

The presence of heterophile antibodies has a high specificity for infectious mononucleosis. These antibodies can be detected by rapid agglutination assays, but false-positive results have occasionally been reported for several conditions, including leukemia, rubella, malaria, systemic lupus erythematosus, pancreatic carcinoma, viral hepatitis, and human immunodeficiency virus infection (1–3).

A 31-year-old female of Pakistani ethnicity presented with a 1-week history of nausea, vomiting, diarrhea, and jaundice. Three weeks previously, she had returned from a 7-week holiday in Pakistan. None of her contacts were unwell. She had no past medical history, and her only medication was an oral contraceptive. Her examination was normal apart from jaundice and right-upper-quadrant abdominal tenderness. In particular, there was no pharyngitis, lymphadenopathy, or splenomegaly.

Results of initial investigations included an alanine transaminase level of 3,308 U/liter, an alkaline phosphatase level of 240 U/liter, a bilirubin level of 104 μmol/liter, an erythrocyte sedimentation rate of 20 mm/h, a C-reactive protein level of 12 mg/liter, and a positive Monolatex test. The patient made a spontaneous recovery, and liver function test results at 6 weeks were normal. Tests of antibodies to Epstein-Barr virus (EBV) capsid antigen were immunoglobulin G (IgG) positive and IgM negative, indicating past infection. Serological results for hepatitis E were IgG and IgM positive, indicative of acute infection.

A false-positive rapid agglutination assay for heterophile antibodies in the presence of acute hepatitis E has not previously been reported. It is conceivable, however, that this result may have been due to liver inflammation rather than the hepatitis E itself. It is also possible that the EBV infection may have been acquired in the recent past, with a coincidental persistence of the heterophile antibody at presentation. The Monolatex test utilizes purified bovine heterophile antigens bound to latex. By using EBV-specific immunofluorescence as the standard, specificity approaches 100% for adults (4). This case emphasizes the need, however, to confirm rapid tests with EBV-specific serology whenever the clinical picture is not clearly that of infectious mononucleosis.

REFERENCES

1. **Schumacher, H. R., R. M. Austin, and S. A. Stass.** 1979. False-positive serology in infectious mononucleosis. Lancet **i:**722.
2. **Hendry, B. M., and J. M. Longmore.** 1982. Systemic lupus erythematosus presenting with a false positive monospot test. Lancet **i:**455.
3. **van Essen, G. G., A. G. Lieverse, H. G. Sprenger, J. Schirm, and J. Weits.** 1988. False-positive Paul-Bunnell test in HIV seroconversion. Lancet **ii:**747–748.
4. **Gerber, M. A., E. D. Shapiro, R. W. Ryan, and G. L. Bell.** 1996. Evaluations of enzyme-linked immunosorbent assay procedure for determining specific Epstein-Barr Virus serology and of rapid test kits for diagnosis of infectious mononucleosis. J. Clin. Microbiol. **34:**3240–3241.

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