

Letters to the Editor

Pathogenicity of *Blastocystis hominis*

We noted with interest the letters by Rosenblatt (4) and Zierdt (6) concerning the possible pathogenicity of *Blastocystis hominis*. This discussion is particularly exciting to the microscopist, as *B. hominis* is probably the second most frequently identified organism (yeasts being the first) in the gut flora. We are concerned that all laboratories are not dealing with the same set of "facts" concerning *B. hominis* since reports on its prevalence of have varied from 0 (5) to 3.2 (2) to 17.5 (3) %. This may be due in part to differing proficiencies of technologists at recognizing the organism.

When *B. hominis* was first defined (as an artifact or yeast), the abilities of laboratorians to recognize it varied highly. *B. hominis* was frequently included in the artifact section of atlases (1), was never included on proficiency tests, and was hardly ever reported. In recent years it has been included, initially as an optional and then as a required organism, in CAP and other state and national survey samples. The recent review by Zierdt (7), however, may be the first publication of extensive high-quality photographs of the organism in its various forms and stages. In our experience it is difficult for the untrained microscopist to identify *B. hominis* with the simple hematology microscope frequently employed for parasite examinations. The frequency of identification improves dramatically when a microscope with high quality optics is employed. Since the organisms lack a cell wall and the cytoplasm is frequently condensed around the periphery, we employ phase-contrast optics as part of every examination. Additionally, we examine all specimens with a trichrome procedure and have found this stain to be excellent for recognition of *B. hominis*.

Using these procedures we have identified *B. hominis* with great frequency. At Meadowlands Clinical Laboratory (Rutherford, N.J.), we found an almost 20% positive rate. At Great Smokies Diagnostic Laboratory we found a 15 to 20% positive rate. As both labs are reference laboratories, receiving most of their specimens from patients visiting physician offices, the prevailing complaints are more chronic than acute. In a separate study of patients with acute gastrointestinal complaints from a largely immigrant population (62% Latin American and 23% Asian) visiting the outpatient GI Clinic of Elmhurst Hospital (Bronx, N.Y.), we observed a positive rate of *Blastocystis* identification of 60% (42 of 70 patients). Trichrome smears were reread at the Centers for Disease Control in Atlanta, Georgia (100% agreement), confirming the accuracy of our observations. It appears to us that this organism is very prevalent in stool samples from both acutely and chronically ill patients and that a need for improved training programs probably exists. We believe that

independent of the status of this organism's pathogenicity, its presence should always be reported. Only then will physicians and researchers have the data on which to draw conclusions concerning the organism's medical significance.

As for the question of pathogenicity, we believe that a certain confusion exists with respect to the possible involvement of this organism in chronic compared with acute illnesses. In the case of acute illness, it is important to be able to identify a unique cause and to be able to direct therapy against this cause. The case for pathogenicity of *B. hominis* in acute illness, although mostly based upon epidemiological evidence, is fairly strong but not conclusive. Clearly, the dialogue and debate are not over. The case for pathogenicity of *B. hominis* in chronic illness, however, is more complex. We frequently observe *B. hominis* in patients with diminished levels of *Escherichia coli* and/or *Lactobacillus* spp., with high fecal pH values, with low butyrate values, and/or with an overgrowth of *Candida* spp. These patients often have prolonged transit times and have assorted gastrointestinal complaints, together with a myriad of other complicating symptoms. We suspect that in these patients *B. hominis* may have a real but weak pathogenicity, contributing to illness as part of a larger picture, including nutritional and digestive components.

REFERENCES

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Ed. Note: Dr. Zierdt felt that no response was necessary.

Medical Wire and Equipment Company Microring YT

A study by Shankland et al. (1) was based on a product that was manufactured by Mast Laboratories, Liverpool, United Kingdom, not by Medical Wire and Equipment Company (MW&E). MW&E had contracted Mast Laboratories in 1987 to make the Microring YT. Because of the poor performance of the Mast-manufactured product, which was

the product used in the above-referenced article, MW&E severed its manufacturing agreement with Mast Laboratories in 1988. MW&E immediately proceeded to research, develop, and manufacture this product in-house. In May 1990, at the American Society for Microbiology Annual Meeting in Anaheim, Calif., a poster session was presented