

INFECTIOUS DISEASE

Diagnosis of *C. difficile*-associated diarrhea in immunosuppressed patients

Pseudomembranes on the mucosa of the colon or rectum are considered a fundamental diagnostic indication for *Clostridium difficile*-associated diarrhea (CDAD). A study by Kenichi Nomura *et al.* has shown, however, that this feature might not be present in all cases of CDAD.

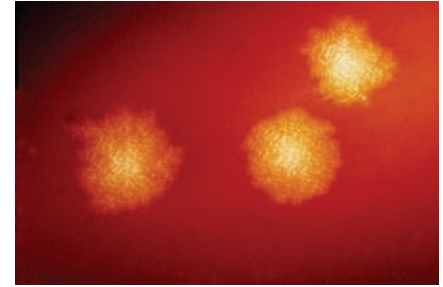
“Detection of pseudomembranes is not always crucial for [the] diagnosis of CDAD”

CDAD is generally diagnosed by stool testing for the presence of *C. difficile* toxins A and B, but false-negative results occur in some cases. Endoscopic examination to detect pseudomembranes is, therefore, an important method of

CDAD diagnosis. Nomura and colleagues noted that pseudomembranes are the result of immunoreactions and hypothesized that they will not be generated in immunosuppressed patients with CDAD.

The team retrospectively assessed data from patients with CDAD who presented with ulcerative colitis and were receiving steroids ($n = 4$) or who had received immunosuppressive agents after undergoing hematopoietic stem-cell transplantation ($n = 4$). CDAD diagnosis was confirmed by the presence of *C. difficile* toxin A in stool.

Endoscopic examinations revealed that pseudomembranes were absent in all patients, which the investigators attributed to the use of immunosuppressive agents. Nomura and colleagues recommend additional bacterial examinations, such as toxin checks, to confirm the diagnosis



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of CDAD in both groups of patients. “Detection of pseudomembranes is not always crucial for [the] diagnosis of CDAD,” confirms Nomura, who hopes to “...shed light on the mechanism of formation of pseudomembrane[s]” in his future research.

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Original article Nomura, K. *et al.* Absence of pseudomembranes in *Clostridium difficile*-associated diarrhea in patients using immunosuppression agents. *Scand. J. Gastroenterol.* 44, 74–78 (2009).