

Nevertheless, further bacteriological characterisation, including antimicrobial resistance patterns and fermentative reactions in sugars, permitted a clear distinction between six different *Clostridium difficile* species. We would recommend, therefore, that case clustering of PMC, suggestive of nosocomial cross infection, is evaluated prospectively using bacteriological typing methods.

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#### Reply

SIR,—Dr Tvede and colleagues expand on several of the points made in the discussion in our paper and pose questions regarding the prospective evaluation of case clusters of pseudomembranous colitis (PMC). The cases we described, however, were not studied prospectively because for several reasons their epidemic nature was not initially apparent. The cases occurred in three separate hospitals in patients under the care of many clinicians, the epidemic was of a protracted rather than explosive kind and when clustering was first recognised attention focused not on the possibility of cross infection but on the prominence of exposure to the third generation

cephalosporin, cefotaxime, an association previously little reported. It was only after epidemiologic investigation that the compelling evidence of person to person spread, which is documented in our paper, became clearly evident. As we stated, however, this could not be conclusively proved microbiologically. A typical view of the pathogenesis of PMC is that almost any of the ubiquitous toxin producing strains of *Clostridium difficile* may (because of alteration of flora or other factors) gain a competitive advantage after therapy with certain antibiotics. The ensuing damage to the colonic mucosa by toxin is manifested as PMC. This pattern may have occurred in the six cases described by Tvede *et al*. The relative frequency of isolated cases of PMC compared with cases caused by person to person spread of a particular strain is currently obscure but obviously has important prophylactic and therapeutic implications. The previous description of epidemics of PMC and in particular the latent and protracted nature of the epidemic we describe suggests to us that person to person spread may be more common than previously realised. We feel that wider recognition of the possibility of cross infection together with the use of prospective studies of the type advocated by Tvede *et al* are necessary to define the relative roles of cross infection and isolated cases in the epidemiology of PMC.

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#### Olsalazine and GI transit in UC

SIR,—I was most impressed with the report of Rao *et al*<sup>1</sup> who noted an accelerated gastric emptying, mouth to caecum transit time and whole gut transit time caused by olsalazine sodium in ulcerative colitis. Although no change in bowel habits was seen among their patients, they attempted to study the diarrhoea reported to occur with olsalazine therapy in some earlier uncontrolled reports.<sup>2,3</sup> I would like to emphasise, however, that diarrhoea has not yet been proved to be a definite or common problem with this therapy. In my controlled study of olsalazine sodium, diarrhoea was no more common among patients with ulcerative colitis treated with the active drug than those receiving placebo.<sup>4</sup> Similarly, in another controlled trial, four patients receiving placebo and only two receiving active drug were withdrawn because of diarrhoea.<sup>5</sup> In one other controlled trial, however, one patient did have increased diarrhoea thought to be caused by olsalazine sodium.<sup>6</sup>

More rigorous study design may at least partially account for the lower incidence of unwanted effects