Comment

Studies in the United States have shown that children less than 2 years old have a 2-4% risk of recurrent *H influenzae* infection.^{1,2} Such children do not mount a protective immune response to polysaccharide capsule antigens. The child in this study may have reacquired the bacterium from a member of her family as a high proportion of contacts of index patients carry the bacteria, or she may have retained it in her nasopharynx as the antibiotics used to treat epiglottitis do not abolish carriage of *H influenzae*.

The risk of recurrent serious invasive infection with haemophilus in this child was the same as the risk to a healthy child under 2 years old of acquiring the disease when in contact with an index patient.¹ The American Academy of Pediatrics recommends that rifampicin be given to the index patient and to all household contacts prophylactically if there is a contact aged less than 49 months or if the patient is less than 25 months old.³ There is evidence that such prophylaxis helps to prevent recurrent disease and secondary cases.² It is, however, used rarely in Great Britain; serious *H influenzae* type b infection and in particular meningitis are thought to be less common than in the United States, yet a survey in Wales showed a similar incidence.⁴ Resistance to rifampicin may occur rarely

but rifampicin is not the antibiotic of choice in established disease.

The success of prophylaxis against an organism that colonises sporadically is surprising. Studies of animals suggest that intercurrent viral illness within a group may increase the rate of nasopharyngeal carriage of and promote invasion by the bacteria. Rifampicin eliminates carriage in most people and may therefore help to protect a susceptible person against infection during a high risk period.

H influenzae meningitis has a mortality of 5% and a risk of handicap of 28%.⁵ We conclude that there may be a role for prophylaxis with rifampicin in selected contacts until a vaccine is available.

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Pancreatitis associated with *Campylobacter jejuni* infection: diagnosis by ultrasonography

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Axial section through ileocaecal valve (arrowheads). Configuration suggests enteritis caused by *C jejuni*

Infection with *Campylobacter jejuni* is a common cause of enteritis.¹ Several extraintestinal manifestations of the infection have been reported.^{1,4} Enteritis caused by *C jejuni* infection has a characteristic appearance on ultrasonography, enabling rapid diagnosis in patients with symptoms in the right lower quadrant of the abdomen.⁵ We describe a case of pancreatitis associated with *C jejuni* infection, in which the correct diagnosis was indicated by ultrasonography.

Case report

A 23 year old woman presented with a four day history of fever, diffuse crampy abdominal pain, and nausea with vomiting. She had also had a short period of diarrhoea. She did not have a history of alcohol abuse. On admission she had upper abdominal pain. Palpation of the abdomen disclosed tenderness in the right upper quadrant. On auscultation bowel sounds were normal. Her erythrocyte sedimentation rate was 50 mm in the first hour and her white cell count $5.4 \times 10^9/l$ (with 11% rod cells). Serum amylase activity was 533 U/l (normal range 10-90 U/l) and urine amylase activity 2360 U/l (normal range 0-525 U/l). The results of other haematological tests were normal.

An x ray film of the abdomen was normal. Ultrasonography showed a normal gall bladder, pancreas, and bile ducts, but there were a few swollen lymph nodes in the hilum of the liver. Graded compression ultrasonography of the right lower abdominal region showed mural thickening of the terminal ileum and caecum (figure) and moderately enlarged mesenteric

lymph nodes. This suggested enteritis caused by *C jejuni* infection. Further questioning of the patient elicited that she had eaten chicken in a restaurant three days before the onset of her symptoms. Her stools were cultured on plates and grew *C jejuni*. She made an uneventful recovery, receiving only parenteral fluids. No antibiotics were given, and her serum amylase activity rapidly decreased to normal. The total picture strongly suggested pancreatitis associated with *C jejuni* infection.

Comment

Pancreatitis associated with campylobacter is a rare but well recognised disease. Thirteen cases have been reported.^{2,4} The pathophysiological mechanism by which *C jejuni* elicits or causes pancreatitis is unknown. It may invade the pancreas directly from the adjacent viscera or along the pancreatic duct.^{2,3} Another possible explanation is that an immune response in the pancreas is initiated by sepsis caused by the bacteria.²

The diagnosis of pancreatitis associated with *C jejuni* infection is usually based on a clinical picture of vomiting, abdominal pain, and raised serum amylase or lipase activity and the presence of *C jejuni* in cultures of stools. In our patient it was suggested by characteristic findings on ultrasonography of the right lower quadrant of the abdomen.⁵ We conclude that pancreatitis associated with *C jejuni* infection should be considered with signs of pancreatitis of unknown aetiology. Ultrasonography may then yield a rapid diagnosis.

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