CASE REPORTS

Streptococcus intermedius Liver Abscesses and Colon Cancer

A Case Report

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ABSTRACT

Certain species of bacteria are known to be associated with colorectal cancer. We report a case of adenocarcinoma of the colon with bacteraemia and liver abscesses due to Streptococcus intermedius. The isolation of this organism should prompt investigation for colorectal neoplasm, which may be present but asymptomatic, without metastases, and therefore at a curative stage.

Abscesos hepáticos por *Streptococcus intermedius* y cáncer de colon

Reporte de un caso

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RESUMEN

Se sabe que ciertas especies de bacterias están asociadas con el cáncer colorectal. El presente trabajo reporta un caso de adenocarcinoma del colon acompañado de bacteriemia y abscesos hepáticos debidos a Streptococcus *del grupo* intermedius. *El aislamiento de este organismo debe impulsar la investigación del neoplasma colorectal, el cual puede estar hallarse presente pero de forma asintomática, sin metástasis, y por consiguiente en una fase en que la cura es aún posible.*

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INTRODUCTION

Streptococcus intermedius is a viridans streptococcus and considered a member of the *Streptococcus milleri* group, along with *Streptococcus constellatus* and *Streptococcus anginosus* (1, 2). These organisms are known to cause pyogenic abscesses and several studies have attempted to describe a clear association between the individual species and particular body sites (3–6). *S intermedius* is cited as a cause of infection involving the brain, oral cavity, respiratory system, skin and liver (2, 4, 7). We report a case of non-metastatic colon cancer with concomitant liver abscesses due to *S intermedius*.

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CASE REPORT

A 55 year-old Caucasian male presented with a four-week history of night sweats and one week of reported subjective fever and chills. He also complained of one week of right-sided abdominal tenderness with no prandial association. Over the past two months, he lost approximately ten pounds, with a diminished appetite and weakness. He denied recent cough, chest pain, diarrhoea, bloody stool, change in bowel habits or trauma.

Physical examination revealed right upper quadrant tenderness with guarding and hepatomegaly. Laboratory studies of the blood showed: white blood cell count, 15.4 x 10^9/L (3.8–9.8 x 10^9/L) (elevated neutrophils); haemoglobin, 5.7 mmol/L (8.56–10.70 mmol/L); haematocrit, 0.28 (0.407–0.503); platelets, 250 x 10^9/L (140–440 x 10^9/L); mean corpuscular volume, 68 fl (80.0–97.6 fl); red cell distribution width, 0.175 (0.118–0.146); total iron, 0.9 µmol/L (8.1–31.3 µmol/L); iron binding capacity, 27.6 µmol/L (39.4–75.2 µmol/L); transferrin saturation, 0.03 (0.2–0.5); ferritin, 1307 pmol/L (45–727 pmol/L); alkaline phosphatase, 301 IU/L (38–126 IU/L); alanine aminotransferase, 108 IU/L (7–53

IU/L); aspartate aminotransferase, 120 IU/L (11–47 IU/L). The patient's stool was haemoccult positive and four blood cultures drawn as two sets on separate days were all positive for viridans streptococci, after incubation for less than 24 hours. Cardiac examination did not reveal a murmur and the transthoracic echocardiogram was normal. Chest X-ray revealed minimal right lower lobe infiltrate with a small right-sided pleural effusion. The initial findings of microcytic hypochromic anaemia prompted the work-up for colonic malignancy. Colonoscopy identified an 8 cm long lesion of the splenic flexure and a 1 cm sessile polyp of the sigmoid colon. Histopathology of the splenic flexure lesion showed invasive, moderately differentiated adenocarcinoma. No diverticulitis or other colonic pathology was present.

A computed tomography scan of the abdomen and pelvis showed innumerable hypo-densities within the liver. Computed tomography guided aspiration of one area of hypo-density obtained approximately 30 mL of blood-tinged cloudy fluid with positive culture for *S intermedius*. Core needle biopsy samples were taken from the periphery of a hepatic lesion in the right lobe and cytology revealed no evidence of metastasis. The largest abscess was drained of approximately 110 mL of pus and the catheter left to dependent drainage. The patient was given intravenous ampicillin/sulbactam and gentamicin, and an elective sigmoid resection with intra-operative drainage of liver abscesses was performed the following week. Local lymph nodes were not involved. The patient recovered following the surgery, with resolution of the infection.

DISCUSSION

No clear link between *S intermedius* liver abscess and colon cancer is previously described (8), though the association between intestinal malignancy and hepatic abscess due to other organisms is well known (9, 10). Biliary system pathology is the most commonly described cause of hepatic abscess due to any organism (11).

In this case, an occult adenocarcinoma of the colon was discovered following investigations of findings of anaemia in a patient with *S intermedius* bacteraemia and multiple *S intermedius* liver abscesses. At present, examination for colorectal neoplasm is recommended for patients with bacteraemia due to *Streptococcus bovis*, *Streptococcus sanguis* or *Clostridium septicum* (12). Since intestinal organisms enter the systemic circulation *via* the portal system, those species with a propensity for abscess formation will likely affect the liver. *S intermedius* hepatic abscesses and associated bacteraemia should arouse suspicion for possible underlying colorectal malignancy. Clinicians are encouraged to initiate a prompt and extensive search for the source of pyogenic liver abscesses because of the benefits of early diagnosis of colorectal neoplasm, a condition that may be present but asymptomatic, without metastases, and therefore at a curative stage.

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