Haemophilus Parainfluenzae Bacteremia Post-ERCP: a Case Report

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Abstract: Haemophilus parainfluenza bacteremia after Endoscopic Retrograde Cholangio-Endoscopic Retrograde Chancreatography (ERCP) is very rare. It is a species that is commonly found in the human respiratory tract. We present here the case of a patient who developed H. parainfluenzae bacteremia after ERCP. The patient was successfully treated with IV ceftriaxone with improvement of symptoms and progressive resolution of her pancreatitis.

Keywords: pancreatitis, cholecystectomy, Haemophilus parainfluenzae.

1) Introduction:

Haemophilus Parainfluenzae is a polymorphic gram-negative bacterium most often responsible for respiratory infections but also for meningitis and otitis. However, it is rarely responsible for infections of the digestive system. Indeed, Haemophilus parainfulenzae bacteremia after ERCP is rare [1].

We report the case of a 20-year-old female patient who presented with Haemophilus bacteremia secondary to ERCP.

2) Case report :

This is a 20-year-old female patient, with no notable pathological history, who has been suffering for three months from pain in the right hypochondrium and epigastrium associated with vomiting. The whole evolving in a context of apyrexia and conservation of the general state.

The physical exam revealed that the patient is conscious, hemodynamically and respiratory stable, apyretic and subicteric.

The blood count showed a white blood cell count of 5840/mm3 and a CRP of 24mg/L.

Liver function tests were normal.

Abdominal ultrasound showed an undistended, thin-walled, multilithiasic gallbladder with a perivesicular effusion layer.

Abdominal CT scan showed an undistended gallbladder with a discretely thick and regular wall.

Twenty-four hours after, the ERCP had been done, the patient presented with pancreatitis with acute pain and a fever of 39°. The biological work-up revealed an increase of lipasemia to 394 (6*N), CRP elevated to 160mg/L, GGT to 86U/L and a normal alkaline phosphatase and total bilirubin level.

Abdominal CT scan showed Balthazar stage E pancreatitis, severity index 6, with necrotic flows in the right parietal-colic gutter and reactive thickening of the right colon wall, as well as a metallic density image in the head of the pancreas.

Blood cultures were performed and came back in favor of Haemophilus Parainfluenza bacteremia. The patient was put on IV ceftriaxon for 10 days with good clinical and biological improvement.

3) Discussion:

Endoscopic bilio-pancreatic tract catheterization represents one of the major advances in digestive endoscopy. However, this examination is not trivial and can be responsible of many complications such as acute pancreatitis, hemorrhage, infection and duodenal perforation [2].

Haemophilus bacteremia is rare. The first case of post-ERCP Haemophilus Parainfluenza bacteremia was published in 1998 about a 49-year-old man who had undergone sphincterotomy [3].

On one hand, Haemophilus is a polymorphic gram-negative bacterium that is part of the normal flora of the upper respiratory tract and can cause meningitis, otitis media, pneumonia, endocarditis, bacteremia, osteomyelitis and septic arthritis. On the other hand, it has rarely been associated with hepatobiliary infections.

Colonization of the digestive system by Haemophilus may be favored by its use of factor V (NAD) as a growth substrate. Indeed, factor V is metabolized and secreted by duodenal bacteria and is found in the bile [4]. According to Riahi et al, bacteremia can be explained by the occurrence of retroperitoneal perforation during sphincterotomy or by the introduction of the bacteria into the upper airway during ERCP and then into the retroperitoneal space through perforation during sphincterotomy [5].

These cases suggest that H. parainfluenzae probably also resides in the gastrointestinal tract, and procedures involving manipulation of the gastrointestinal mucosa may provide an additional route of entry into the bloodstream or peritoneal cavity. Post-operative antibiotic prophylaxis is not systematically prescribed, but its use seems to reduce the risk of bacteremia after ERCP. It may indeed be recommended in certain immunocompromised patients.

4) Conclusion:

Bacteremia after ERCP is rare. Colonization of the gastrointestinal tract by haemophilus parainfluenzae is unusual as it is a bacterium usually found in the respiratory tract. H. parafluenzae infection should be considered in any patient with postoperative complications of ERCP or abdominal surgery.

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