

Relationship between symptoms of ischemic heart disease and upper abdominal digestive organ disease

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Abstract: We previously reported that percutaneous transarterial coronary angioplasty (PTCA) seemed to decrease cardiac complications in patients with ischemic heart disease (IHD) who underwent abdominal surgery. After the report, 1293 PTCA were performed for patients with IHD in our institute. Of these 1293 patients, 6 patients underwent abdominal surgery under general anesthesia within 14–150 days after successful PTCA. We observed the relationship between symptoms of IHD and upper abdominal digestive organ disease (ADOD), which sometimes occurs concomitantly in IHD patients. In conclusion, the present study identified some features of the chief complaints and symptoms of IHD patients with concomitant upper ADOD. This information should prove useful for making a differential diagnosis and deciding treatment.

Key words Symptoms · Ischemic heart disease · PTCA · Upper abdominal digestive organ disease

Introduction

At our institute, 1293 percutaneous transarterial coronary angioplasties (PTCAs) were performed between October 1996 and July 2000 for patients with acute myocardial infarction (AMI) or angina pectoris (AP). Of these 1293 patients, 6 patients underwent abdominal surgery under general anesthesia within 14–150 days after successful PTCA (laparoscopic cholecystectomy, $n = 1$; laparotomic cholecystectomy, $n = 1$; subtotal gastrectomy, $n = 2$; total gastrectomy, $n = 2$).

We previously reported that, within 7–71 days after successful PTCA, five patients who had been diagnosed

with cholecystolithiasis ($n = 1$) or gastric cancer ($n = 4$) underwent abdominal surgery under general anesthesia without serious cardiac events [1]. PTCA thus seemed to decrease cardiac complications in patients with ischemic heart disease (IHD) who underwent abdominal surgery.

Given these experiences, we observed the relationship between IHD and upper abdominal digestive organ disease (ADOD), which sometimes occurs concomitantly in IHD patients. One IHD patient with cholecystolithiasis complained of biliary colic, but was actually experiencing angina. The first doctor in the outpatient clinic to examine the patient correctly diagnosed the situation, but only with difficulty. In such cases, particularly when epigastralgia is present, reaching a diagnosis using only the chief complaint is difficult. For example, gallbladder disease can mimic IHD through similar symptoms of nausea and epigastralgia.

The present study examined whether any relationships exist between symptoms of IHD and upper ADOD. A study group was selected from the total of 1293 patients who underwent PTCA (as noted above), and the characteristics of the chief complaints and symptoms at the time of anginal attack were studied.

Hospital records revealed 27 patients who had displayed IHD and upper ADOD on arrival. IHD included effort AP ($n = 8$), unstable AP ($n = 7$), inferior AMI ($n = 8$), and anterior AMI ($n = 4$). Concomitant upper ADOD comprised esophagitis ($n = 2$), cholecystolithiasis and/or common bile duct (CBD) stones ($n = 8$), gastric ulcer and/or gastritis ($n = 7$), gastric cancer ($n = 4$), duodenal ulcer ($n = 2$), and others ($n = 4$). Chief complaints in anginal attacks were epigastralgia, upper abdominal pain, chest pain, chest oppression, sense of strangulation, sore throat, back pain, and nausea and/or vomiting.

The characteristics of the chief complaints and symptoms of the patients with upper ADOD who underwent PTCA can be summarized as follows.

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Sex ratio

The mean age of patients was 66.8 years (range, 52–88 years). Patients comprised 22 men (81.5%) and 5 women (18.5%). The presence of IHD may be indicative of concomitant upper ADOD in men more than in women. However, no clear reason for this difference is apparent.

IHD patients with gallbladder disease

Of the eight patients with cholecystolithiasis, 5 (62.5%) described anginal attack as uncomfortable oppression from chest to epigastrium, with colicky pain. Differential diagnoses should therefore be made more carefully in IHD patients with a history of gallbladder disease. An association between cholesterol cholecystolithiasis and coronary heart disease was reported in the Framingham study in 1985 [2]. The authors stated that male patients with cholecystolithiasis were at increased risk of subsequent coronary disease. Both gallbladder stones and coronary artery disease are associated with cholesterol levels, but no solid evidence has yet linked coronary artery disease and gallbladder disease [3].

IHD patients with gastrointestinal disease

Gastrointestinal disease was the most common of the concomitant upper ADODs, occurring in 13 patients (48.1%). In 5 patients, gastric or intestinal bleeding from malignant tumor seemed to promote anginal attacks. With regard to chest pain of noncardiac origin, Ho et al. [4] showed that gastroesophageal reflux disease was the most common cause of such pain, accounting for approximately one-third of cases. Whenever IHD patients are treated, the association between gastrointestinal disease and IHD should be considered.

Symptomatic characteristics of elderly patients (age, >73 years)

Elderly patients tended to describe anginal attacks as digestive symptoms, such as loss of appetite or nausea and vomiting. Three such cases were encountered in this study.

Degree of coronary artery stenosis

Coronary artery stenosis comprised single-vessel disease in 9 patients, double-vessel disease in 13 patients, and triple-vessel disease in 5 patients. In this study, most patients displayed multiple-vessel disease. One patient with triple-vessel disease in this study developed shock after AMI and died due to acute obstructive cholecystitis arising from cholecystolithiasis. Patients with suspected severe IHD should undergo treatment for primary upper ADOD before a severe anginal attack can occur.

Influence of treatment for IHD

Treatments for IHD itself, such as antiplatelet or anti-coagulant therapies, may result in ulcerative disease. Two such cases were noted in this study. Norita et al. [5] reported a patient with emergency gastrectomy, cholecystectomy, and coronary artery bypass grafting. This patient with unstable angina developed sudden hematemesis due to massive bleeding from a gastric ulcer.

In conclusion, the present study identified some features of the chief complaints and symptoms of IHD patients with concomitant upper ADOD. This information should prove useful for making a differential diagnosis and deciding on treatment.

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