Case Report

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A rare case of acute abdominal pain: an association between herpes zoster and cholecystitis

Abstract

Acute abdominal pain is a common symptom and often inconsequential. It can represent a wide spectrum of conditions from benign to surgical emergencies. The association of two diseases as a cause of acute abdominal pain is uncommon. It may cause a delay in the diagnosis. Here we are reporting an unusual coexistence of herpes zoster and acute cholecystitis in a previously healthy 55-year-old female patient.

Keywords: herpes zoster, acute cholecystitis, abdominal pain, laparoscopic cholecystectomy

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Introduction

Abdominal pain is a very common symptom with wide differential diagnoses including; gastroenteritis, irritable bowel disease (IBS), appendicitis, diverticulitis, urological, biliary, and pancreatic causes. Besides, uncommon causes include herpes zoster (HZ) and neoplastic causes.[1] Rarely, abdominal pain occurs from the combination of two diseases in the same patient that makes the diagnosis harder. To our knowledge, no more than 3 cases of herpes zoster associated acute cholecystitis (AC) have been reported in the literature.

Case report

A 55-year-old woman was referred to the surgical emergency department with severe acute abdominal pain located in the right upper quadrant for 18 hours. The pain was not responsive to analgesics as paracetamol or non-steroidal anti-inflammatory drugs (NSAIDs) and had lasted for about 8 hours. The pain was accompanied by anorexia. There was no pyrexia, vomiting, or changes in bowel habits. The patient was diagnosed with herpes- zoster two weeks before and treated with oral acyclovir. There were no past medical, or surgical history. On physical examination: Temperature, pulse, and blood pressure were within normal limits. A unilateral vesicular eruption was found in the upper right abdomen spreading to the back (Figure 1). Murphy's sign was positive. Lab results were as in (Table 1). Abdominal ultrasound showed a gallstone that lodged in the neck of the gallbladder and it was about 1cm. She underwent a laparoscopic cholecystectomy. Grossly; The gallbladder size was about 5x9cm, wall thickening 3mm, it contained sludge and had strawberry gallbladder appearance. One crystal shape stone of about 1.2cm was found inside the gallbladder (Figure 2). Microscopic findings showed no malignancy and suggested the diagnosis of chronic cholecystitis. The stone had an unusual shape, we couldn't examine it as the test is not available in our hospital. The patient was discharged on the same day of surgery with no complications. We followed the patient for one year after the surgery, she is healthy now with no abdominal pain or post-herpetic neuralgia.

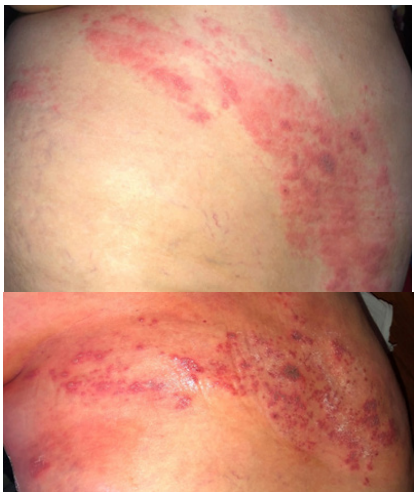

Figure 1 Vesicular rash on the patient's abdomen.

Table 1 The laboratory data of the case.

Test	Result	Test	Result
WBCs (10^3/µl)	8.6	ALT(U/L)	38
Neutrophils (%)	63.8	CRP(mg/dl)	5
Lymphocyte (%)	29.5	Na(µmol/L)	135.6
Hgb(g/dl)	13.4	K(µmol/L)	3.68
PLTs(10^3/µl)	348	Cl(µmol/L)	106.1
Urea (mg/dl)	26	PT(sec)	12
Creatinine(mg/dl)	1.1	INR	1
Glucose(mg/dl)	111		

WBCs, White blood cells; Hgb, Hemoglobin; PLT, platelets; CRP, C-reactive protein; ALT, alanine aminotransferase; Na, sodium; K, potassium; Cl, chloride; PT, prothrombin time; INR, international normalized ratio.

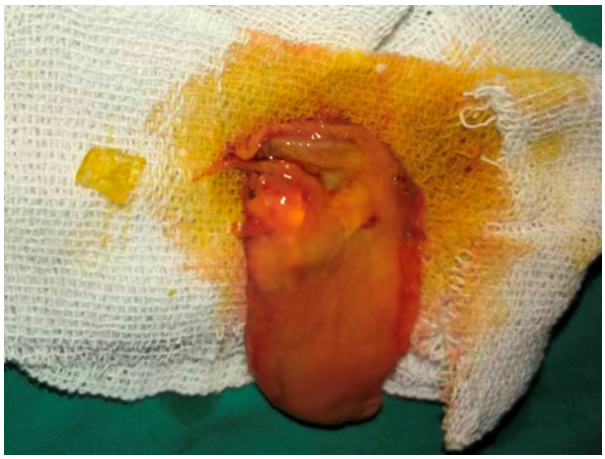

Figure 2 The gallbladder and gallstone after resection.

Discussion

Herpes zoster is a dermal disease caused by reactivation of Varicella-Zoster Virus (VZV) within dorsal root ganglia after a long time (usually decades) from the initial infection of chickenpox.[2] The estimated incidence of HZ is about (1.2–4.8) per 1000 people per year with female dominance, however, this number increases to 14.2 per 1000 people per year in more than 50 years of patients.[3] VZV is characterized as pain in the affected skin (most common in the lower thoracic area) followed by the appearance of the unilateral vesicular eruption on an erythematous base that doesn't cross the midline of the body.[4] The pre-eruption phase of the disease is hard to diagnose, and mimic several situations including acute coronary syndrome (ACS), herniated intervertebral discs, appendicitis, pancreatitis, AC, renal and biliary colic.[5] AC is a common medical condition that pain and tenderness in the right upper abdominal quadrant which may radiate to the right shoulder and lasts more than 6 hours. It is an important differential diagnosis to HZ, especially in the pre-eruptions phase. The occurrence of the two diseases in the same patient was first described by Rana, Sorokhaibam & Chongtham in 2016 in two HZ patients who complain of abdominal pain.[6] The pathological mechanism of the association between the two diseases is not clear now. Most of the cases described the presence of the two diseases together, and the used treatment without researching the mechanism. Laparoscopic cholecystectomy was safely performed in the patients of medical literature.[6] Our patient was suffering from a burning sensation for two weeks due to HZ, felt a different type of pain, and this was the clue to diagnosing the additional disease which was AC. The new pain appears to be deeper and sharper, she had never experience that pain before. In our case, in addition to the two cases from the literature, laparoscopic cholecystectomy was safely done. The insertion of laparoscopic tools across the affected skin didn't cause any problems. So, we confirm that the presence of AC and its surgical treatment didn't affect the prognosis of HZ or increase the presence of postherpetic neuralgia. The coexistent of HZ and AC should be kept in mind when the diagnosis is not clear or the patient is not improving on appropriate therapy.

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Conflicts of interest

The authors declare no conflict of interest.

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