A Rare Presentation of Varicella: Acute Appendicitis

Dear Editor,

Acute appendicitis is one of the most exceptional complications of varicella. We have a patient with varicella who was diagnosed as acute appendicitis initially and had vesicular rash on the second post-operative day.

A previously healthy 10-year-old female was admitted to our hospital with complaints of abdominal pain lasting for 2 days and vomiting. There was no skin lesion at first examination. Her abdomen was sensitive especially in the right lower quadrant. Abdominal ultrasonography revealed acute appendicitis with a diameter of 10 millimeters. Patient underwent appendectomy. There were no fecalith detected in gross examination. Histopathological examination of the appendix revealed neutrophilic infiltration and necrotic wall with diffuse proliferation of lymphocytes (Figure 1). On the second postoperative day vesicular skin lesions were noted on her trunk (Figure 2). Serological tests showed anti-Varicella zoster virus (VZV) IgM and IgG antibodies in peripheral blood. The patient was discharged on the third postoperative day.

Acute appendicitis is the most common cause of abdominal surgery for children. It is generally accepted that obstruction of the appendix lumen is the initiative cause of acute appendicitis. This obstruction might be caused by lymphoid hyperplasia, fecalith or other foreign bodies (usually seeds of fruits). Lymphoid hyperplasias which have developed as the result of bacterial infections such as Escherichia coli, Bacteriodes fragilis, Yersinia, Salmonella or Shigella, parasitic infestation such as Entamoeba histolytica and enteric or systemic viral infections such as Epstein-Barr virus, Adenovirus and Cytomegalovirus, may cause obstruction in appendix lumen. Likely, lymphoid hyperplasia is seen in the pathological investigation of the appendix in our case, too. This makes us think that lymphoid hyperplasia that developed during the incubation period of the infection may have caused acute appendicitis.

It is not possible to clearly understand the relation between herpes viruses and acute appendicitis. Katzoli et al showed viral DNA of CMV, HHV-6, EBV and HSV-1 viruses in the appendectomy specimens of a group of 38 children with acute appendicitis. But in their study there were no specimen positive for VZV or HSV-2. Pogorelic et al reported the first case of varicella related appendicitis confirmed by PCR evidence of VZV in appendix tissue. Our case was not diagnosed as varicella before the appendectomy operation so we fixed the appendectomy specimen with formalin solution routinely. Maybe with this
Characteristic skin lesions in different stages of development (maculopapular or vesicular) were seen on the trunk (Photos were obtained on the postoperative 7th day).

reason PCR analysis of appendix tissue was negative for VZV DNA in our case.

Acute appendicitis still remains an extremely rare complication of varicella and there are only a few case reports of acute appendicitis as a complication of varicella. In these reports the diagnosis of varicella is known before the operation of appendectomy. But here we describe, to our knowledge, the first case of varicella presenting with acute appendicitis.

It can be conclude that lymphoid hyperplasia which is developing in the incubation period of the varicella infection, may have caused acute appendicitis. Although varicella is generally a mild infectious disease for children, it rarely may cause surgery requiring complications. Further studies are necessary to understand the exact role of the virus in the pathogenesis of acute appendicitis.

References


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