Case Report

Aggressive Gallbladder Cancer in A Young Child Presenting as Acute Pancreatitis

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Abstract

Gallbladder cancer in the background of polypoid lesions is rarely reported in children. We report a case of a gallbladder polyp and sludge in a 10-year-old girl who was presented with recurrent right upper quadrant abdominal pain and vomiting. Initial blood work up confirmed acute pancreatitis. Ultrasound examination of the abdomen revealed a polypoidal mass in gall bladder and later it was confirmed on Computerized Tomographic (CT) Scan to be 2.2 × 1.5 cm lesion arising from wall of gall bladder. Laparoscopic cholecystectomy was performed. Histopathological examination of the gallbladder revealed poorly differentiated adenocarcinoma arising in the background of adenomatous polyps. Tumor was reaching up to muscular layer with negative resection margins. Surveillance CT scan at 3 months showed bony metastasis. In conclusion, though gallbladder carcinoma is rare in children, it can be highly aggressive.

Keywords: gallbladder cancer, pancreatitis, laparoscopic cholecystectomy

Introduction

Although polypoid lesions of the gallbladder are reported frequently in adults, its frequency in children is extremely rare [1]. They may or may not co-exist with gallstones. A size greater than 10 mm warrants cholecystectomy. Over 90% of the polyps are benign, with cholesterol lesions accounting for the majority [2-3]. Adenomas of the gallbladder account for only 1% of all lesions [4] but they are important because of their potential transformation to invasive carcinoma [5]. Though gallbladder polyps are reported in male and obese children, the experience of polypoidal lesions of the gallbladder in children is limited [6]. We report an unusual case of a gallbladder cancer in a pre-adolescent girl who presented with acute pancreatitis.

Case Report

A 10-year-old girl was presented to the emergency room of our hospital with complaints of severe epigastric pain and vomiting. Abdomen was tender in epigastrium. Blood work up showed raised serum amylase levels (1230 IU) and diagnosis of acute pancreatitis was made. She did not have any hemodynamics instability and no features of organ dysfunction, so she was admitted in general ward with plan of non-operative management of acute pancreatitis.
Her ultrasound abdomen was done to look for etiology of pancreatitis which revealed sludge in gallbladder along with a polypoid lesion in the body of the gallbladder as shown in Figure 1.

![Ultrasound of Gallbladder showing polypoid growth (arrow) in lumen of gallbladder](image1)

**Figure 1:** Ultrasound of Gallbladder showing polypoid growth (arrow) in lumen of gallbladder

Computerized tomographic (CT) scan of the abdomen confirmed the lesion to be of irregular growth measuring 2.2 × 1.5 cm in lumen of gallbladder as shown in Figure 2. There was no evidence of distant metastasis on the CT scan.

![Axial sections of Computerized Tomographic (CT) scan of abdomen showing polypoid lesion (arrow) in gallbladder lumen](image2)

**Figure 2:** Axial sections of Computerized Tomographic (CT) scan of abdomen showing polypoid lesion (arrow) in gallbladder lumen

Laparoscopic cholecystectomy was performed after pancreatitis was treated. Histopathological examination of the gallbladder showed poorly differentiated adenocarcinoma reaching up to muscularis propria, arising in the background of adenomatous polyps. Based upon the report, she was advised to have resection of liver bed, but parents...
did not agree for surgery and opted for close surveillance. Surveillance CT scan at 3 months showed pulmonary and bony metastasis. She was kept on palliative care before she passed away 4 months after laparoscopic cholecystectomy.

**Discussion**

Gallbladder lesions as classification by Christensen and Ishak [3] are grouped as benign tumors, pseudotumors, and malignant neoplasms. Over 90% of the polyps are benign, with cholesterol lesions accounting for the majority of them [2]. Adenomas of the gallbladder account for only 1% of all lesions [4], but they are important because of their potential transformation to invasive carcinoma [5]. The experience of polypoidal lesions of the gallbladder in children is limited [6].

As with most cancers, gallbladder cancer is more common in older people than in younger people. The size of gallbladder polyp and the presence of gallstones have been reported as risk factors for neoplastic polyps. Polyps ≥ 10 mm had a 24.2 times greater risk of malignancy than polyps < 10 mm. Even small polyps have a risk of malignancy, and careful long-term follow up of these patients is advised to help detect and treat early gallbladder cancers [7]. Gallbladder cancer (GBC) is a tumor with very poor prognosis. It is usually diagnosed at an advanced stage, and the 5-year survival rates for T3 and T4 tumors are 12% and 5% respectively [8]. On the other hand, T1 and T2 GBC have 95-99% and 70% five-year survival rates respectively [9]. In addition to polyp size, there is still controversy about other potential risk factors for malignancy, such as gallstones and the number of polyps.

Aggressiveness of gallbladder cancer in children has not been studied yet but it has been seen that in other tumors like colorectal cancer, tumors arising at young age are usually aggressive [10]. In areas where gallbladder cancer is common like Asian countries and Chile, special attention needs to be focused on diagnosing these tumors early [11].

**References**