



CASE REPORT

Cholelithiasis in children: experience from Bangladesh

MR Gazi

Abstract

Most of the time clinicians overlook the diagnosis of cholelithiasis in children because of its atypical presentation. The present study reports paediatric cases of cholelithiasis treated in Gazi Medical College Hospital, Khulna, Bangladesh during the period from 2002 to 2013. In order to assess the frequency of paediatric cholelithiasis cases and treatment outcome, the author reviewed the patient records. The retrospective analysis found 9 paediatric cases who underwent a laparoscopic cholecystectomy performed from 2002 to 2013 at Gazi Medical College Hospital by a single Consultant Surgeon (the author). The cases were 7 females and 2 males. The average age was 8 years. The reports and full case history notes were checked and data were extracted accordingly. Correspondence was done to confirm the outcome of any subsequent follow up. It was found that clinically no one was obese but nutritional deficiency was obvious because all the patients were from poor family. Final diagnosis was made by ultrasonography. All of them recovered uneventfully after laparoscopic cholecystectomy.

Key words: Cholelithiasis, paediatric cases, laparoscopic cholecystectomy, treatment outcome, Gazi Medical College Hospital, Bangladesh

Introduction

Cholelithiasis is very rare in childhood but when occurs, can become a potentially serious condition.¹ It does not always present itself in the classical clinical picture of adult cholelithiasis and is not considered as a typical differential diagnosis of abdominal pain.^{1,2} Most of the time clinicians overlook the diagnosis because of its atypical presentation. Patient may present non-specific abdominal pain but no classical feature of cholelithiasis like pain in right hypochondrium, which may increase after meal, positive Courvoisier's, Murphy's sign, etc. Only ultrasonographic findings make the proper diagnosis. In this article the author

presents the cases of cholelithiasis in children treated in Gazi Medical College Hospital, Bangladesh. In order to assess how common paediatric cholelithiasis was as well as the outcome of given treatment, the author reviewed the patient records to identify any paediatric patient (aged 16 years or below) who had undergone a cholecystectomy. The reports and full case history notes were reviewed and data were extracted accordingly. Correspondence was done to confirm the outcome of any subsequent follow up and to identify any other medical problems which may have arisen after the procedure or had an impact on the patient developing cholelithiasis. This

is a retrospective analysis of 9 paediatric patients who underwent a laparoscopic cholecystectomy performed from 2002 to 2013 at Gazi Medical College Hospital, Khulna by a single Consultant Surgeon (the author). The cases were 7 females and 2 males. The average age was 8 years. Some of the cases are presented:

The cases

Rana, male, 4 years (Fig. 1)

He was admitted into Gazi Medical College Hospital with the complaints of non-specific abdominal pain, sometimes around the umbilicus, another time in lower abdomen, sometimes in whole abdomen. Pain was not severe but mild to moderate, not related to meal. He was reluctant to food intake, had occasional dysentery, but no history of vomiting, jaundice, fever, diarrhoea. According to his mother's statement, those complaints started since last 4 months. He was a caesarean baby, first child of his mother who had bicornuated uterus, underwent caesarean operation at 36 weeks of her pregnancy. There was no history of taking birth control pill by his mother. He belongs to a poor family and his nutritional status was not satisfactory. On examination- General condition is satisfactory. Systemic examination of cardiovascular, respiratory, genitourinary, neurological, psychiatric, locomotor, metabolic system revealed no abnormality. On palpation of abdomen- mild tenderness at right hypochondrium. Ultrasonography- Multiple gall stones with no sign of acute inflammation nor common bile duct obstruction. Other laboratory tests revealed no abnormality.



Fig. 1. The picture of Rana (aged 4 years) after cholecystectomy.



Fig. 2. The picture of Ashamoni (aged 8 years) with Consultant Surgeon after cholecystectomy.

Ashamoni, female, 8 years (Fig. 2)

She was admitted with the complaints of mild upper abdominal pain, anorexia, also had moderate to severe upper abdominal pain with vomiting from 2 months back, was treated at her locality with antibiotics and other drugs and her pain was subsided. She had fever but no jaundice. Ultrasonography of abdomen showed calculus cholecystitis. Her Serum Bilirubin and SGPT were within normal range. She was born through normal delivery at home with no significant intranatal nor postnatal complication. Objective examination showed no abnormal findings except tenderness at right hypochondrium.

Maria, female, 6 years (Fig. 3)

The first child of her parents admitted into this hospital with non-specific abdominal pain. She was malnourished. Her mother's history revealed nothing contributory other than taking contraceptive pills. Laboratory



Fig. 3. The picture of Maria (aged 6 years) after cholecystectomy.

reports showed normal CBC, RBS, LFT, worms in stool and ultrasonography indicated cholelithiasis with no sign of infection.



Fig. 4. The picture of Imran (aged 13 years) after cholecystectomy.

Imran, male, 13 years (Fig. 4)

He was admitted into this hospital with complaints of chronic mild pain in epigastric region, increased after meal sometimes associated with nausea and vomiting for last 2 years. He belongs to lower middle class family. Ultrasonography revealed cholecystitis with cholelithiasis.

Discussion

Etiology and predisposing factors

Etiological factors for formation of gallstones in children are same as in adults. It was described that 1 out of 8 patients with cholelithiasis had hereditary haemolytic anaemia and another 4 were obese.³ Soderlund et al found a coexistence of haemolytic anaemia with cholelithiasis was also found in 3 of 56 patients, obesity in more than 50% of patients and some relations with hereditary haemolytic anaemia in few patients.⁴

History

The first case of gall-stones in a child was published by Gibson in 1734, who performed an autopsy in 1723 and found concretions in the gallbladder and in the common bile duct

of a boy of 12 years of age whose chief symptoms had been abdominal pain, vomiting and acholic faeces.⁵ In 1928, Potter presented the first comprehensive report.⁶ He described four cases of his own and 224 from the literature. In 1938 he collected a further 200 cases published by different authors and reported four additional personal cases. Ulin, Nosal and Martin in 1952 collected 30 new cases from the literature and at the same time made a critical analysis of Potter's cases.⁷ In their opinion, only 296 of Potter's cases could be regarded. Upto 1960 about 500 cases were described.

Present cases

It was found that clinically no one was obese as found in western literature but nutritional deficiency was obvious because all the patients were from poor families. Final diagnosis was made by ultrasonography. All of them underwent typical 4 ports laparoscopic cholecystectomy and recovered uneventfully. Pigment stones were found in 6 cases and cholesterol-pigmented (mixed) stones found in 3 cases.

Conclusion

Gallstone related disease can often present in a non-specific manner and the classical signs are often absent. Murphy's sign is unreliable and children may find it difficult to describe the typical pain of biliary colic and cholecystitis. Clinicians often misdiagnose the condition as a urinary tract infection and appendicitis also commonly documented in differential diagnoses. Usually, there is a chronic history of generalized abdominal pain of some months or more. Clinicians should therefore hold an index of suspicion for a diagnosis of gallstones in any paediatric presentation of abdominal pain. Malnutrition, helminthiasis, birth control pill taken by mother, enteric fever are the most common predisposing factors to develop cholelithiasis in children in developing country like Bangladesh.

References

1. Sutton R, Cheslyn-Curtis S. Acute gallstone pancreatitis in childhood. *Ann R Coll Surg Engl* 2001;83(6):406-8.
2. Bruck SW, Ein SH, Rocchi C, Kim PC. The management of nonpigmented gallstones in children. *J Pediatr Surg* 2000;35(5),729-32.
3. DG, Naguib NN, Izzidien AY. Paediatric gallstones and laparoscopic cholecystectomy. *Health* 2010;2(1):67-9.
4. Söderlund S, Zetterström B. Cholecystitis and cholelithiasis in children. *Archives of Disease in Childhood*, 174-80. A paper read at a meeting of the British Association of Paediatric Surgeons in Stockholm, September 1961.
5. Gibson J. An extraordinary large gall-bladder and hydropich cystis. In: *Medical Essays and Observations* (revised first edition). Royal Society of Edinburgh 1734;2:352.
6. Potter AH. Gall-bladder disease in young subjects. *Surg Gynec Obstet* 1928;46:795.
7. Ulin AW, Nosal JL, Martin WL. Cholecystitis in childhood: associated obstructive jaundice. *Surgery* 1952;31:312.

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