



Case Report

BILATERAL LUMBAR HERNIA - A RARE OCCURRENCE IN INFANT

S ISLAM¹, AKMA MORSHED, MA HUQ³, MM ALAM⁴, SK Mondal⁵, K Hasina⁶

Abstract

Lumbar hernias are rare in children. We report a case of bilateral lumbar hernia in a 39 days old boy who was admitted at pediatric surgery department in Dhaka Medical College Hospital with the chief complaints of bilateral flank swellings since birth. There were no urinary or bowel complaints. Palpation revealed reducible, non-tender, soft to firm swellings involving iliolumbar region in left and lumbar region in right. These were increased on crying. On auscultation bowel sounds were present in left side and absent in right side. There were no other congenital anomalies. Ultrasonography revealed herniated bowel loops in left iliolumbar region and mild pelvicalical dilatation in left kidney and slightly bigger right kidney in right lumbar region. On the basis of these findings a diagnosis of congenital bilateral lumbar hernias were made. Closer of the defects were done by prosthetic material and non-absorbable suture material. He came back for follow-up after 2 weeks, 4 weeks and 6 weeks. Defects were clinically absent and the patient was pain and recurrence-free.

Introduction

Lumbar hernia is a rare abdominal hernia with fewer than three hundred cases reported over past three hundred years. Approximately 10% of all lumbar hernias are congenital and vast majority are unilateral. They occur one or two areas of potential weakness,

the superior or inferior lumbar area.^{1,2,3} Most congenital hernias occur in the superior lumbar triangle.⁴

Lumbar hernia is the protrusion of intraperitoneal or extraperitoneal contents through a defect of the posterolateral abdominal wall. Barbette was the first, in 1672, to suggest the existence of lumbar hernias. The first case was reported by Garangeot in 1731. Petit and Grynfeld delineated the boundaries of the inferior and superior lumbar triangles in 1783 and 1866, respectively.⁵

They can occur in otherwise normal babies. Congenital lumbar hernia may be associated with caudal regression anomalies, diaphragmatic hernia, uteropelvic junction obstruction, cloacal exostrophy and lipomenigocele.⁶ Clinical diagnosis of this entity is difficult due to non-specific symptoms which may be referred gastrointestinal, genitourinary or musculoskeletal system.⁷

Lumbar region is an area defined superiorly by the 12th ribs, inferiorly by the iliac crest, medially by the erector spinae muscle group and laterally by the posterior border of external oblique muscle as it extends to the 12th rib to the crest. The two lumbar triangles are the superior triangle (triangle of Grynfeld) and inferior triangle (Petit's triangle).⁴

Grynfeld's triangle is an inverted three sided space that is bordered by 12th rib superiorly, internal oblique muscle laterally and quadratus lumborum muscle medially and roof of the triangle is formed by the latissimus dorsi, while the transversalis muscle aponeurosis form the floor.⁴

The Petit's or inferior lumbar triangle is an upright triangle bounded by the iliac crest inferiorly, external oblique muscle anteriorly and latissimus dorsi

1. Dr. Shahnoor Islam, Asst. Professor, Department of Pediatric Surgery, Dhaka Medical College & Hospital, Dhaka.
2. Dr. AKM Amirul Morshed, Asst. Professor Department of Pediatric Hematology and Oncology, Dhaka Medical College & Hospital, Dhaka.
3. Dr. Md. Ashraf Ul Huq, Associate. Professor, Department of Pediatric Surgery, Dhaka Medical College & Hospital, Dhaka
4. Prof. Md.. Mahbub-Ul- Alam, Professor & Head, Department of Pediatric Surgery, Dhaka Medical College & Hospital, Dhaka
5. Dr. Susankar Kumar Mondal, Resident, Department of Pediatric Surgery, Dhaka Medical College & Hospital, Dhaka.
6. Dr. Kaniz Hasina, Assistant Professor, Department of Pediatric Surgery, Dhaka Medical College & Hospital, Dhaka.

Correspondence to: Dr. Shahnoor Islam, Asst. Professor, Department of Pediatric Surgery, Dhaka Medical College & Hospital, Dhaka, E-mail-shahnoor6989@yahoo.com

posteriorly. Roof consists of skin and superficial fascia. Internal oblique muscle lies in the floor.⁴The defect occurs at the site of penetration of the ilio hypogastric, ilioinguinal or lumbar nerves.

The defects in lumbar musculatures or aponeurosis may be congenital, spontaneous or traumatic. Spontaneous or traumatic hernias are more frequent in left side, in man and in patients between 50 and 60 years. Most of these hernias are spontaneous, remaining hernias are from trauma.⁷ A lumbar hernia present as a bulge. Palpation may revealed a soft tissue swelling that is easily reducible. The hernial sac may contain extra peritoneal fat, extra peritoneal fat and kidney or colon as well as intra peritoneal structures, most commonly small bowel. Bowel incarceration occurs in approximately 25% of these hernias and strangulation may occur.⁷

If the defect is not palpable, ultrasonography (US) or computed tomography (CT) may be necessary to identify the exact location of the hernial defect.⁷ Other common masses, which can present as lumbar swelling are abscess, hematoma, soft tissue tumours, renal tumours and panniculitis.¹

Closer of the fascial defect should be done without tension. Rarely, prosthetic material may be necessary to permit a tension free closer of the defect.⁷

Case Report

Salauddin, 39 days old boy, s/o Maejuddin from Bagerhat, was admitted at the department of pediatric surgery in Dhaka Medical College Hospital with the chief complaints of bilateral flank swelling since birth. (fig.1). According to statement of the mother, baby was born by normal vaginal delivery at term after prolong 2nd stage of labour. After delivery she noticed bilateral flank swelling (left more than right). Initially swellings were comparatively smaller in size and increased on crying. Other systemic inquiry revealed nothing significant. On examination there was a non-tender reducible lump with a crying impulse in the left lumbar region. The lump was about 15 cm x 15 cm in size, soft to firm in consistency, free from overlying skin and underlying structures and felt a fascial defect after it was reduced. left kidney was palpable. On auscultation bowel sound was present. Another non-tender lump was situated in right lumbar region measuring about 5 cm x 4 cm in size, firm in consistency, mobile, reducible and free from overlying skin and underlying structures. Crying impulse was



Fig.-1: Photograph bilateral lumbar hernia at the age of 39 days

present and kidney was palpable. Bowel sound was absent over the swelling. Haemogram was normal, urine routine examination, serum creatinine, chest x-ray A/P view revealed normal. Ultrasonogram showed herniated bowel loops with evidence of increased peristalsis in left lumbar region, more on back with pushed up of left kidney and mild pelvicalical dilatation in left kidney, Right kidney was superficially placed and slightly bigger in size. Cortex and medulla was well defined in both kidneys.

The patient was diagnosed as bilateral reducible lumbar hernia and subsequently prepared for early elective surgery under general anesthesia because of progressive enlargement of the mass, though the infant was cheerful, well nourished and active. Transverse incisions were employed over the lumps. The bowel loops were carefully safeguarded. The sac was not opened on any side (fig-2). It was apparent at operation that both lumbar triangles were affected on left and only superior on right. The muscles and fasciae forming the boundaries of these two triangles were present, though somewhat distorted. The hernial orifice were closed primarily using stout nonabsorbable, monofilament suture, securing the oblique muscles and quadratus lumborum to the periosteum of the iliac crest in both region. Then a non absorbable mesh was placed over the left defect to retain the intestine

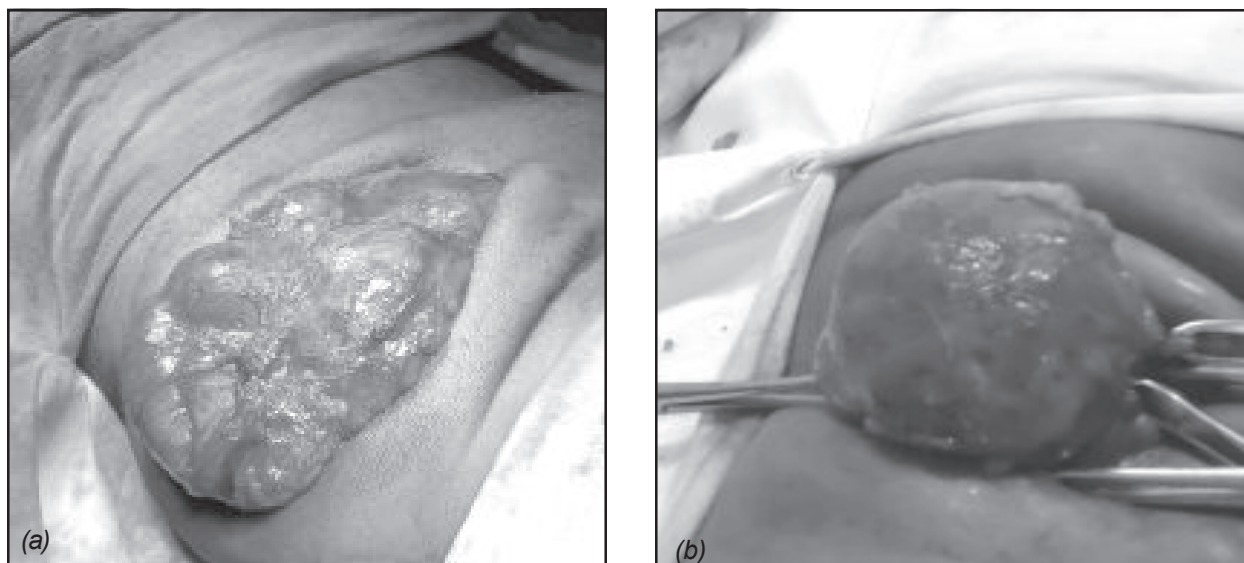


Fig.-2: Photograph of the dissection of the sac a) Left side b) Rt side

within the abdomen and kidneys in the place (fig.3) . No drain was kept in place. Closure of the subcutaneous layer and skin was done with a fine absorbable suture. Post operative period was uneventful. He was discharged on 8th post operative day tolerating regular breast feeding. He came back again for follow up after 2 ,4 ,6 weeks of discharge. There was no evidence of recurrence and baby was healthy. (fig.4)



Fig.-3: Photograph of the completed repair before closure of the skin



Fig.-4: Photograph had taken six weeks after repair of the bilateral lumbar hernia without evidence of recurrence

Discussion:

Lumbar hernia is a rare abdominal hernia with fewer than three hundred cases reported over past three hundred years.¹ Karmani S, Ember T, Davenport R, report the first case in literature of isolated bilateral

congenital lumbar hernia.³ They can occur in otherwise normal babies but may be associated with lumbocosto-vertebral deficiency syndrome.⁷ But in our patient no such associated anomalies was noted. Clinical diagnosis of this entity is difficult due to non-

specific symptoms which may be referred gastrointestinal, genitourinary or musculoskeletal system. But in our patient clinical diagnosis was easy to make.

Lumbar region is an area defined superiorly by the 12th ribs, inferiorly by the iliac crest, medially by the erector spinae muscle group and laterally by the posterior border of external oblique muscle as it extends to the 12th rib to the crest. The two lumbar triangles are the superior triangle (triangle of Grynfelt) and inferior triangle (Petit's triangle)⁴. In our patient, both triangles were involved in left side and superior triangles in right.

The defects in lumbar musculatures or aponeurosis may be congenital, spontaneous or traumatic. Spontaneous or traumatic hernias are more frequent in left side, in man and in patients within 50 and 60 years. Most of these hernias are spontaneous, remaining hernias are from trauma. In our patient, these were congenital but bilateral. A lumbar hernia present as a bulge. Palpation may reveal a soft swelling that is easily reducible. The hernial sac may contain extra peritoneal fat, extra peritoneal fat and kidney or colon as well as intra peritoneal structures, most commonly small bowel. Bowel incarceration occurs in approximately 25% of these hernias and strangulation may occur⁷. In our patient, baby was presented as bilateral flank swellings. Palpation also revealed two soft swellings that were easily reducible. The hernial sacs contained bowel and kidney in left side and only kidney in right side. Bowel incarceration or strangulation was absent in left and right side.

If the defect is not palpable, ultrasonography (US) or computed tomography (CT) may be necessary to identify the exact location of the hernial defect⁷. In our patient, the defects were palpable. We did an USG which showed herniated bowel loops in left lumbar region more on back with mild pelvic dilataion in left kidney and herniated kidney on right lumbar region.

Closer of the fascial defect should be done without tension. Rarely, prosthetic material may be necessary to permit a tension free closer of the defect⁷. In our patient repair of left side was done with non absorbable monofilament suture and prosthetic material and right side was done by non absorbable monofilament suture.

Conclusion

Maternal awareness and early diagnosis of a rare disease may reveal good surgical outcome and reduce the morbidity of the patient with bilateral lumbar hernia. Early repair of congenital lumbar hernias in infants after correction of other life-threatening conditions is advocated. Unlike the acquired variety, congenital lumbar hernia may include a more extensive deficiency of the entire lateral wall extending to the rectus sheath and satisfactory closure of the defect without prosthetic material may be difficult or impossible. There is low recurrence rate in early repair of the defect.

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Case Report

INFLAMMATORY PSEUDOTUMOUR OF MESENTERY: A CASE REPORT

B MIRZA*, A SHEIKH

Case Report

A 5-year-old male child was presented to our hospital with complaint of abdominal pain and a palpable abdominal mass for 15 days. The child was alright 15 days back when he had an episode of pain abdomen in the peri-umbilical region. The parents noticed a mass like hardness in the central abdomen. There was no history of vomiting, constipation, fever, rash or trauma.

The general physical examination of the patient was normal. Abdominal examination revealed a hard mass in the peri-umbilical region with irregular margins.



Fig.-1: Is showing mass in the mesentery of small intestine.



Fig.-2: Showing excised mass

Ultrasound abdomen revealed a mass of mixed echogenicity in that region. CT scan abdomen showed a heterogeneous mass in the periumbilical region with internal calcifications. The preoperative diagnosis was neuroblastoma. All the laboratory parameters were in normal limits. The patient was optimized for surgery and an exploratory laparotomy was performed.

At operation there was a hard mass arising from the mesentery of distal ileum [Image 1]. The mass was completely excised along with some part of distal ileum and limited hemicolectomy performed [Image 2]. The postoperative recovery was uneventful. The patient was started orally on 4th postoperative day and discharged on 8th postoperative day.

Histopathology of the submitted sample revealed a benign lesion comprising of spindle shaped fibroblasts

1. Dr. Bilal Mirza*, Dr. Afzal Sheikh, Department of Paediatric surgery, The Children's Hospital & The Institute of Child Health Lahore, Pakistan.

Correspondence to: Dr. Bilal Mirza, Department of Paediatric surgery, The Children's Hospital & The Institute of Child Health Lahore, Pakistan. Email: blmirza@yahoo.com