Lichtenstein repair in a 50year old known hypertensive woman with right inguinal Hernia

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Abstract: Hernias by themselves may be asymptomatic, but nearly all have a potential risk of being strangulated. Inguinal hernias are usually caused by a congenital defect which occurs as a weakness in the inguinal canal manifesting after injury, pregnancy or aging. This was a case of a 50-year-old woman known hypertensive who presented with right inguinal swelling of two years duration. The swelling was painless and had increased progressively in size. Examination showed the abdomen to be full, moved with respiration, no area of tenderness, liver and spleen were not enlarged and the kidneys were not ballotable. There was a palpable and visible cough impulse in the right inguinal region. She was managed for hypertension and the hernia by Lichtenstein repair. The Lichtenstein repair which is a tension-free repair was found to be associated with a lower incidence of recurrence, pain, numbness, and discomfort and so it is a better option than the traditional Bassini repair. However, despite evidence of better outcomes in Lichtenstein repair, most Physicians especially in Nigeria have not adopted this in their practice. Therefore, there is a need for more publications on this approach of herniorrhaphy.

Key-words: Lichtenstein repair, hypertensive, woman, inguinal Hernia

Introduction

A hernia occurs when the contents of a body cavity bulge out of the area where they are normally contained. These contents, usually portions of intestine or abdominal fatty tissue, are enclosed in the thin membrane that naturally lines the inside of the cavity. Hernias by themselves may be asymptomatic, but nearly all have a potential risk of having their blood supply cut off (Balentine, 2011). Inguinal hernias are usually caused by a congenital defect which occurs as a weakness in the inguinal canal manifesting after injury, pregnancy or aging.

Inguinal hernias may appear following surgery or after heavy lifting, following childbirth, exercising, persistent coughing, straining while urinating or defecating or by gaining a lot of weight. In males the patients may present with a lump or swelling in the groin, a sudden pain into the scrotum, abdominal discomfort, a heavy feeling in the groin and features of intestinal obstruction (Irabor et al, 2002, Shittu et al, 2001). The patient being presented came with a swelling in the groin.
Case presentation

She was a 50-year-old woman known hypertensive who presented with right inguinal swelling of two years duration. The swelling was painless and had increased progressively in size. Occasionally the swelling became more prominent on standing and coughing and resolved when the patient lied on the bed. No similar swelling in the left inguinal region. No history of chronic cough, abdominal swelling, constipation, and history suggestive of difficulty in passing urine. She was on Normoretic (amiloride 5mg/hydrochlorothiazide 50mg) one tablet daily. No history of allergy. She was diagnosed with hypertension two years before presentation. Examination showed a middle-aged woman who was not pale, anicteric and afebrile(37.4°C). Her weight was 60kg, her height was 1.6m and the BMI was 23.44kg/m² (normal). The abdomen was full, moved with respiration and no area of tenderness. The liver and spleen were not enlarged and the kidneys were not ballotable. There was a palpable and visible cough impulse in the right inguinal region. The rectal examination was normal. The pulse rate was 66beats/minute, regular, normal volume, blood pressure was 160/100mmHg. The apex beat was at the 5th left intercostal space mid-clavicular line. Heart sounds S1 and S2 were normal and there were no murmurs.

A provisional diagnosis of right inguinal Hernia was made. The patient was offered an option of bilateral repair because of the possibility of occult contralateral hernia but she opted for a unilateral repair. The urinalysis for glucose and protein was negative. She was placed on lisinopril 5mg daily and was to continue amiloride 5mg /hydrochlorothiazide 50mg one tablet daily. When seen after a week, she did not have new complaints, the blood pressure was 140/86mmHg and she was admitted for surgery. Electrolyte, urea, and creatinine were normal. The packed cell volume was 34% (normal). Electrocardiogram showed regular rhythm, heart rate was 80beats/m and normal axis. A written Informed consent was signed by the patient before the procedure.

Operation: Right inguinal herniorrhapy (Lichtenstein repair) under Local anaesthesia.

Procedure: An intravenous line was set on the patient and 1gram of ceftriaxone was given. The patient was laid supine on the operating table and skin preparation was done below the umbilicus up to the perineum. Then 180mg of 1% xylocaine with adrenaline was administered by infiltration. An oblique skin incision about 8cm long was made about 1.25cm above the line of the inguinal ligament from the pubic tubercle. The superficial fascia was incised and the external oblique aponeurosis exposed. It was then incised from the external ring along its fibers. Then both leaves of the aponeurosis were retracted to expose the inguinal ligament, internal oblique muscle, conjoint tendon and the cord with its investing cremasteric fascia and muscle. The cremasteric fascia was incised, there was an empty sac measuring 5cm by 5cm going along the spermatic cord. The sac was then separated from the spermatic cord by blunt and sharp dissection. The sac was transfixed at the neck, ligated and excised about 1cm above the ligature. A piece of polypropylene mesh was trimmed to match the inguinal floor. The lateral end was split to accommodate the spermatic cord. The mesh was then placed over the inguinal floor between the inguinal ligament and conjoint tendon and sutured in place. The leaves of the external oblique were sutured and the wound was closed in layers.

Findings: An empty sac measuring 5cm by 5cm going along the spermatic cord.

Post-operation assessment: The patient was stable and there were no complaints. The pulse was 72beats/min regular, normal volume. The BP was 140/90mmHg. The respiratory rate was 16cycles/min. The patient was to take oral fersolate tablet 400mg thrice daily, acetaminophen 1g thrice daily and vitamin C 500mg daily for five days. The patient was discharged on the day of operation and asked to come on the second day post operation for inspection of the wound. On the second day post-operation, there were no new complaints. Patient’s condition was satisfactory. The wound dressing was changed. The blood pressure was 136/85mmHg. By the seventh day post-operation, the patient had improved considerably, wound healing was satisfactory and the sutures were removed. The blood pressure was 130/85 and she was to be seen in four weeks in the clinic for further check-up. Patient was advised to abstain from strenuous exercise for the next six weeks.

Discussion

Inguinal hernia repair is one of the most commonly performed general surgical procedures. In a retrospective study to compare the immediate and long-term outcomes of Lichtenstein and Kugel methods of inguinal hernia repairs in a single surgeon's practice, Dasari et al (2009) found that there was no significant difference in the immediate complication rates between the two operations. The patient being discussed had Lichtenstein repair of
her hernia. Traditional suture repair of inguinal hernia is fast giving way to routine tension-free mesh repair because many studies had demonstrated fewer recurrence with meshes than with traditional suture repair(Usoro et al, 2008). This patient had tension-free mesh repair of her right inguinal hernia. A systematic review of randomized controlled trials showed that mesh repair was associated with fewer recurrences of hernia. This was one of the reasons why this patient opted for Lichtenstein repair after being counseled. Douglas et al compared the feasibility and time saving for placement of mesh for open inguinal hernias with a tacker versus polypropylene suture. They found that using the tacker on open inguinal hernia repairs shortens the time for mesh placement compared to suture fixation. Decreased operative time may reduce overall cost (Douglas et al, 2002). In another study it was reported that Tissucol fibrin glue for mesh fixation in the Lichtenstein repair of inguinal hernia shows advantages over sutures, including lower incidence of pain, numbness and discomfort, and should Lichtenstein tension-free hernioplasty improve sexual function and general quality of life without adverse effects, it should be considered as a first-line option for mesh fixation in hernioplasty(Negro et al, 2010).

Because of the possibility of occult contralateral hernias, Pawanindra and others concluded that patients should be given the option of bilateral repair and that unilateral repair is a job half done( Pawanindra et al, 2010). This patient opted for right inguinal herniorrhaphy after she was counseled for a bilateral repair. El-Awady reported that Inguinal hernia impaired testicular perfusion that improved postoperatively mesh effects on testicular volume or perfusion( El-Awady and Elkholy, 2008). Sanjay et al reported that Prolene Hernia System repair under local anaesthesia and general anaesthesia( local anaesthesia results in increased day cases with similar complication rates compared to general anaesthesia. Both anaesthetic techniques( local anaesthesia and general anaesthesia) are associated with good outcomes and excellent patient satisfaction(Sanjay and Woodward, 2008). The patient being discussed had local anaesthesia administered for the herniorrhaphy and the post-operative condition was satisfactory. Patients might develop anaphylactic reaction to xylocaine and they might feel pain if the anaesthesia wears off in the course of surgery. Mohan Desarda developed a method based on the use of an undetached strip of the external oblique aponeurosis which strengthens the posterior wall of the inguinal canal. Kryspin et al compared Desarda technique with Lichtenstein repair and found that Desarda primary hernia repair is as effective as Lichtenstein surgery(Mitura and Romańczuk, 2008). Sanjay et al in a retrospective study found that the use of local anaesthesia results in increased day-case rates, lesser postoperative analgesic requirements and fewer micturition problems(Sanjay and Woodward, 2008). The Lichtenstein repair which is a tension-free repair has been found to be associated with a lower incidence of recurrence, pain, numbness and discomfort and so it is a better option than the traditional Bassini repair.

Conclusion

This was a case of a fifty-year-old trader who presented with a progressive right inguinal swelling of two years duration and had Lichtenstein repair of the hernia. She was also being managed for hypertension. The Lichtenstein repair which is a tension-free repair was found to be associated with a lower incidence of recurrence, pain, numbness and discomfort and so it is a better option than the traditional Bassini repair. However, despite evidence of better outcome in Lichtenstein repair, most General Practitioners, Family Physicians and General Surgeons especially in Nigeria have not adopted this in their practice. Therefore, there is a need to create more awareness on this approach of herniorrhaphy.

References


