A Giant Inguinoscrotal Hernia in the 21st Century Urban Nigeria Setting? A Case Report and Review of the Literature

Thaddeus Chika Agu[1,2], Mary Philomena Ikeanusi[3]

[1]Department of Surgery, First Choice Specialist Hospital, [3]Department of Surgery, Immaculate Heart Hospital, Nkpor Anambra State, [2]Department of Surgery, Imo State University, Owerri, Nigeria

Abstract

Negligence could make an inguinal hernia to increase in size and with the passage of time; it may assume a giant size with accompanying medical and social impacts on the patient. Traction on the ilioinguinal nerve and spermatic cord causes dragging sensation in the groin with the attendant discomfort. The inability to wear fitting pants, the disturbance of sexual activities, and the consequent gait abnormality were some of the compelling reasons in this patient that made him to seek surgical consult. Nylon darn herniorrhaphy was done without a mesh and without any untoward postoperative event in a level II surgical facility. This case report illustrates mainly, ignorance, negligence and fear of surgery as mitigating factors in the management of this condition in our sub-region and less of the surgical challenges a giant inguinoscrotal hernia may pose.

Key words: 21st century, giant inguinoscrotal, hernia, negligence, Nigeria

Introduction

Inguinal hernia is a common surgical pathology[1] that is diagnosed clinically and treated mostly in secondary health care facilities in the south eastern sub-region of Nigeria. But giant inguinoscrotal hernia is uncommon, and more so in the urban communities.[1-4] There are reasons why a patient will not present early and inadvertently allows a small inguinal hernia to increase to a grotesque size. These include the absence of complications, ignorance of available orthodox treatment, fear of surgery and anesthesia, and misconceptions over medical expenses.[1,2] Despite many accredited health facilities available to our patient as an urban dweller, he continued to cope with the hernia until it descended to mid-thigh level engulfing the penis in the process.

There are reports of treatments of giant inguinal hernias conducted on the platform of free medical missions in rural communities without health facilities, in our sub-region.[1] The few reports in the 21st century Nigeria are on patients from rural areas[1-3] and to the best of our knowledge, there are no similar reports in the recent times on patients living in urban communities. Because this condition is rare, consensus treatment protocol is difficult to formulate.[5] We carried out a tension free repair with nonabsorbable monofilament suture after forced reduction, without debulking and without postoperative complications. This case further illustrates that managements of giant inguinoscrotal hernias are better individualized.

Access this article online

Quick Response Code:

Website: www.njgp.org

DOI: 10.4103/1118-4647.189754

Case Report

A 43-year-old male trader presented to our specialist surgical facility in November 2015 with a 5-year history of an increasing right groin swelling. Initially, the swelling popped out on lifting loads and reduced spontaneously. Eight months prior to presentation, the swelling, which had already involved the scrotal sac had started to affect ambulation and coitus. There was heaviness in the groin and feeling of incomplete voiding of urine. There were no other urinary symptoms, no constipation, and no chronic cough. The patient had phobia for surgery. Physical examination in the standing position showed a right inguinoscrotal mass descending to the level of the inner

Address for correspondence: Dr. Thaddeus Chika Agu, First Choice Specialist Hospital, Nkpor, Anambra State, Nigeria. Imo State University, Owerri, Nigeria.
E-mail: tcagu@yahoo.com, tcaguireneth@yahoo.com

How to cite this article: Agu TC, Ikeanusi MP. A giant inguinoscrotal hernia in the 21st century urban Nigeria setting? A case report and review of the literature. Niger J Gen Pract 2016;14:42-5.

mid-thighs with almost completely engulfed penis [Figure 1]. There were no friction abrasions on the scrotum. The mass was irreducible, one could not get above it, the right testis was palpable and there were no palpable abdominal masses. Digital rectal examination was normal. A diagnosis of giant right inguinoscrotal hernia was made and the plan was to repair.

The hemoglobin was 12.2 g/dl. Abdominal ultrasonography was normal. The patient was counseled for surgery, and an informed consent was obtained. The patient was catheterized and clear urine was drained. Under general anesthesia, and with right inguinal approach, the sac was incised to drain 570 ml of peritoneal fluid. The greater omentum which appeared thickened as as well as part of the transverse colon were in the sac [Figure 2]. The spermatic cord was located medial to the sac in the region of the internal ring. Its' contents as well as the testis were normal [Figure 3]. The urinary bladder was sliding on posteromedial part of the sac. The inguinal anatomy was not markedly attenuated, and also because we did not have a synthetic mesh, the intra-operative decision was to perform a simple tension free nylon darning. The contents of the sac as well as the sliding bladder were reduced and a low sac ligation was done before herniorrhaphy with polypropylene 1. Hemostasis was achieved and leaving a redundant scrotum, the wound was closed without a drain. The urine remained clear with adequate volume and the catheter was removed after 48 h. Scrotal support and elevation were effected with a firm comfortable underwear. He had an uneventful recovery and was discharged after 10 days. He was advised to abstain from strenuous activities until review at the outpatient department. The short term results at 6 months were satisfactory [Figure 4].

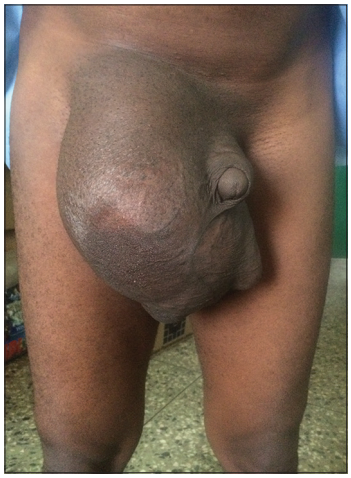

Figure 1: A giant inguino-scrotal hernia, sac descends down to the inner mid-thighs in a standing position

Figure 3: The spermatic cord kept out of harms way before the repair. Note also the indwelling cathtetar to decompress the bladder and to indicate any iatrogenic injury

Discussion

Inguinal hernias are common among males that engage in strenuous physical activities. The rural Nigerian farmers are mainly affected.[1,3] Giant inguinoscrotal hernias on the other hand are uncommon and they are the hernias that descend to the inner mid-thighs or beyond, with the patients in standing positions.[6] Giant inguinoscrotal hernias would develop when

Figure 2: The main content of the sac was the denuded greater omentum and part of the transverse colon, the large quantity of peritoneal fluid was already evacuated

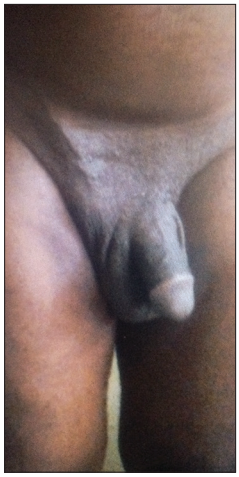

Figure 4: Follow up at 6 months postoperation showing satisfactory result

inguinal hernias are not treated but continue to enlarge. The factors that make a patient with inguinal hernia to present at this late stage include negligence and the fear of surgery and patronage of unorthodox practitioners[3,4] among others reasons. Medical conditions that increase the risks of surgery and anesthesia make the surgeon to postpone hernia repair and this wait could result in further enlargement of the hernia.[7] Furthermore, absence of symptoms delays presentation. Our patient was symptomless for the first 4 years and the hernia continued to enlarge until it started affecting ambulation and sexual activities adversely. In giant inguinal hernias, because of the over-stretched internal rings and canals that occurred over time, complications such as obstruction, strangulation, and torsion are uncommon.[1,2] Reports on giant hernias had always implicated cosmetic dysfunctions, sexual dysfunctions and dragging groin pain, scrotal ulcerations, and vanishing penises as reasons for presentation and not because of emergency surgical complications.[1,3,4,6]

Giant inguinoscrotal hernia is rare because herniorrhaphy is a procedure that many trained doctors at the primary or secondary health facilities could perform. When a patient presents early with inguinal hernia as expected in the urban areas, repair is carried out. Our patient despite his secondary school education and good living conditions in the city, had fear of surgery which made him to present late, at the time when the hernia had reached a gigantic size. In this 21st century, it could only imply a misplaced fear and ignorance about safety advances made in surgery. Consequently, patient needed counseling before he gave consent for surgery as there was no alternative.

The preoperative assessments of this patient included exclusion of colonic masses. Tumors of the colon have been reported to be associated with inguinal hernias in the elderly patients,[8,9] but this may also be coincidental. Some authors advocated the use of barium enema to diagnose colonic tumors in these patients though they noted its' low yield of 0–2.5% and high safety compared to colonoscopy.[5,9] Colonoscopy has a higher yield but also has a risk of perforation.[9] Computerized tomography scan obviates these problems but our patient could not afford it and so we used ultrasonography.

There are some surgical challenges in the management of giant inguinal hernias. First, the inguinal anatomy could be attenuated with the attendant difficulty in achieving a good repair without autogenous fascia graft or synthetic mesh. The inguinal structures in this patient were judged strong enough for herniorrhaphy. Successful repair of giant hernias without mesh have been recorded[2,3] though recent reports show superiority of mesh hernioplasty.[6,9,10] Second, the possibility of sliding of urinary bladder or other retroperitoneal organs. The patient had feeling of incomplete voiding without other features that would suggest prostatism. Preoperatively, he was catheterized to decompress the bladder and as anticipated, sliding of the bladder was identified intraoperative. Keeping it out of harm's way prevented iatrogenic injury and the urine was clear throughout the procedure.

Third, the loss of domain by the herniated visceras means abdominal volume contraction and the sudden reduction of these structures could result in abdominal compartment syndrome. The splintage of diaphragm causes respiratory embarrassment, low cardiac output, renal shut down and sometimes death.[3,6] Urine output should therefore be monitored, another reason to catheterize the patient. The degree of volume contraction depends on the extent of hernia gigantism and duration. Therefore, vigilance must be exercised in the immediate postoperative period and where this is a major risk, patient should be nursed in the intensive care unit and when absolutely necessary, re-operation to return some viscera to the scrotum albeit temporarily should be undertaken.[10] Some authors suggested debulking by omentectomy or hemi-colectomies or small bowel resection[11] or their combinations. These complementary procedures should be weighed against the patient's hemodynamic stability. Bowel preparations should be considered if resections are anticipated, especially in giant hernias with completely engulfed phalluses even when tumescent.[11] Understandably, a mesh should not be used if a large bowel was resected. Preoperative expansion of the abdominal volume by insufflation of air was introduced by Moreno in 1947[12] originally for ventral hernias, and later adapted for giant inguinal hernias but this has been abandoned because air escape into the hernia sac and also it took time to achieve an appreciable expansion. The cavity could be expanded by placing relaxing incisions on the abdominal wall and repairing them with mesh or with graft harvested from excess scrotal skin.[10] The patient did not have these challenges because the gigantic size had only lasted for a few months, supposedly not enough time for gross tissue attenuation and volume contraction.

Fourth, the excess scrotal skin could result in redundancy and hematoma. Excising the skin to discard could prevent the problem of redundancy but this is not necessary as dartos muscle soon causes retraction.[10,13] We achieved adequate hemostasis and the wound was closed without excision of scrotal skin and without a drain. The spermatic cord and testis were preserved but in the elderly, these could be excised[7] to achieve better repair. To protect our repair, the patient was advised to avoid strenuous activities in the immediate postoperative period. Of great importance also, is the short and long term follow-ups of the patient to monitor for any recurrence and for any new hernia developing on the contralateral side.

Conclusion

Giant inguinoscrotal hernias in the 21st century urban Nigeria setting are uncommon and could result from patients' negligence and fear that cause delay in the earlier managements of inguinal hernias. Repairs without synthetic meshes, without debulking and without untoward postoperative complications are possible but these are dependent on the extent of hernias' gigantism, durations, and the intraoperative findings.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.

References
1. Akpo EE. Bilateral giant inguinoscrotal hernia: Psychosocial issues and a new classification. Afr Health Sci 2013;13:166-70.
2. Osifo O, Amusan TI. Outcomes of giant inguinoscrotal hernia repair with local lidocaine anesthesia. Saudi Med J 2010;31:53-8.
3. Ibrahim AG, Aliyu S, Mohammed BS. Giant inguino-scrotal hernia: Our experience in Maiduguri, North Eastern Nigeria. Int J Surg Rep 2014;12:2723-6.
4. Gupta V, Sharma AK, Tez M. A giant inguino-scrotal hernia. JK Sci 2007;9:200-2.
5. Trakarnsagna A, Chinswangwatanakul V, Methasate A, Swangsri J, Phalanusitthepha C, Parakonthun T, *et al.* Giant inguinal hernia: Report of a case and reviews of surgical techniques. Int J Surg Case Rep 2014;5:868-72.
6. Coetzee E, Price C, Boutall A. Simple repair of a giant inguinoscrotal hernia. Int J Surg Case Rep 2011;2:32-5.
7. Turner EJ, Malhas A, Chisti I, Oke T. Management of a giant inguinoscrotal hernia with an ulcerated base in a patient with cardiac disease. J Surg Case Rep 2010;2010:9.
8. Tan GY, Guy RJ, Eu KW. Obstructing sigmoid cancer with local invasion in an incarcerated inguinal hernia. ANZ J Surg 2003;73:80-2.
9. Slater R, Amatya U, Shorthouse AJ. Colonic carcinoma presenting as strangulated inguinal hernia: Report of two cases and review of the literature. Tech Coloproctol 2008;12:255-8.
10. Mehendal FV, Taams KO, Kingsnorth AN. Repair of a giant inguinoscrotal hernia. Br J Plast Surg 2000;53:525-9.
11. Serpell JW, Polglase AL, Anstee EJ. Giant inguinal hernia. Aust N Z J Surg 1988;58:831-4.
12. Connolly DP, Perri FR. Giant hernias managed by pneumoperitoneum. JAMA 1969;209:71-4.
13. Tahir M, Ahmed FU, Seenu V. Giant inguinoscrotal hernia: Case report and management principles. Int J Surg 2008;6:495-7.