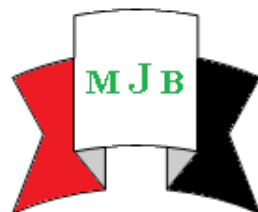


Spermatic Cord Lipomas: A Common Finding But A Subtle One

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Abstract

True lipomas of the spermatic cord, as defined in surgical pathology textbooks, are rarely encountered during inguinal hernial surgical repair procedures. The most commonly encountered finding is a prolongation and/or extension of the retroperitoneal fat through the deep inguinal ring along or within the spermatic cord contents.

This study tries to investigate the incidence, clinical significance and the best methods to predict the presence of the misnamed lipomas of the spermatic cord versus the true lipomas of the spermatic cord using classical open Lichtenstein and laparoscopic hernioplasty.

A retrospective study of the records of (150) patients submitted to (160) surgical intervention for open/laparoscopic hernioplasty over a period of three years had been thoroughly investigated. Hernioplasty was conducted using laparoscopic total extraperitoneal (TEP) in (50 = 31.25%) cases while the remaining (110 = 68.75%) cases were managed using open Lichtenstein hernioplasty.

The study showed that the ratio of indirect: direct inguinal hernia was (2.33:1). The proportion of right: left: bilateral inguinal hernias was (5.78:3.12:1). The incidence of spermatic cord lipomas was (20 = 12.5%) cases. Among these spermatic cord lipomas only (2 = 1.25%) cases were true lipomas in terms of surgical pathology. There is some difficulty in clinical diagnosis of these lipomas and it is easy to be misdiagnosed as cases of irreducible and/or obstructed inguinal hernias.

Spermatic cord lipomas can cause symptoms similar to that of inguinal hernia with the absence of any associated hernial sac. It is easy to miss these lipomas when using laparoscopic hernioplasty especially when employing the procedure of (TAPP) with the persistence of the preoperative symptoms. Such postoperative complaints may constitute a source of problematic distress to the laparoscopic surgeon. Accordingly, surgeons should be aware of the possible co-existence of spermatic cord lipomas during any type of inguinal hernioplasty.

Key words: Lipomas, spermatic cord, Lichtenstein, laparoscopic hernioplasty, inguinal hernioplasty, Babylon.

الأورام الشحمية للحبل المنوي، شائعة الحدوث ولكنها مائعة

الخلاصة:

أن الأورام الشحمية الحقيقية للحبل المنوي كما عرفت كتب علم الأمراض الجراحي هي حالات نادرة الحدوث والتي يمكن أن يواجهها الجراحون أثناء إجراء عمليات رأب الفتوق المغننية. أن الأكثر حدوثاً هو وجود امتدادات للشحم الخلف الصفاقي ومن خلال الفتحة الأربية الداخلية وعلى امتداد وضمن مسير محتويات الحبل المنوي.

تحاول هذه الدراسة بحث نسبة حدوث ما يسمى بالأورام الشحمية للحبل المنوي والأهمية السريرية لها وأحسن الطرق للتعاب بوجودها مقابل الأورام الشحمية الحقيقية للحبل المنوي والتي تتحقق فيها توصيف علم الأمراض الجراحي وذلك أثناء رأب الفتوق المغننية بالطرق التقليدية و الناطورية.

تم إجراء دراسة أستاذية للملفات الطبية ل (١٥٠) مريض والذين تم تعريضهم الى (١٦٠) عملية لرأب الفتق المغنني بالطرق التقليدية و الناطورية لفترة ثلاث سنوات متتابعة. أن رأب الفتوق المغننية بالطريقة الناطورية قد تم بالطريقة الخارج صفاقية الكاملة في (٥٠ = ٣١,٢٥%) حالة بينما تم إجراء الرأب الفتقي بالطريقة التقليدية مع زرع شبكة صناعية لزيادة قوة الرأب في (١١٠ = ٦٨,٧٥%) حالة.

بينت هذه الدراسة أن نسبة حدوث الفتق المغبني الأيمن : الأيسر : كلا الجهتين هي (٥,٨٧ : ٣,١٢ : ١) وأن نسبة حدوث هذه الأورام كانت في (٢٠ = ١٢,٥%) حالة. شكل الورم الشحمي الحقيقي للحبل المنوي والذي يحقق توصيف علم الأمراض الجراحي (٢ = ١٢,٥%) حالة. لقد تبين أن هناك نوع من الصعوبة في التشخيص السريري لهذه الأورام وأنه من السهل أن يتم تشخيصها سريريا خطأ كحالات فتوق مغبنية غير قابلة للأرجاع أو مختنقة.

أن أورام الحبل المنوي الشحمية من الممكن أن تسبب أعراضا مشابهة لتلك التي تصاحب الفتوق المغبنية بالرغم من عدم أي فتق مصاحبة لها وأنه من الممكن أن لا يتم تشخيص وجود هذه الأورام باستخدام رأب الفتق الناظوري وخصوصا مع رأب الفتق الناظوري خارج الصفاقي الكامل مما قد يؤدي الى استمرار شكوى المريض من نفس أعراض ما قبل التداخل الجراحي وهكذا نتائج من الأكيد أنها سوف تكون مصدر مشاكل وأزعاج لجراحي النواظير.

مفاتيح الكلمات: الأورام الشحمية , الحبل المنوي, رأب الفتوق المغبنية, حراحة الناظور , بابل.

Introduction

Spermatic cord lipomas are common findings that surgeons encounter during inguinal hernia surgical repair in males. These lipomas may attain such a big size that it may constitute a diagnostic problem in clinical surgical diagnosis. In most of the times the diagnosis is not settled only during the operative demonstration of contents of the spermatic cord as an important step in the hernial surgical repair procedures [1,3] To be more precise, the term lipoma may be a *misnomer* as it is in most cases just a protrusion or prolongation of retroperitoneal fat via the internal inguinal ring which is usually located laterally to the spermatic cord contents. These lipomas, by common sense, are usually indirect when they are going to be related to the spermatic cord contents and are more commonly associated with indirect type of inguinal hernias[4] True lipomas, from surgical pathology point of view, are benign, spindle-shaped tumors of lipocytes which have a surrounding capsule and should have no connection with the retroperitoneal fat. True spermatic cord lipoma with such criteria is relatively rarely encountered in operative surgery. The significance of spermatic cord lipoma arises from the fact that it is may be difficult to be diagnosed preoperatively, may present itself as irreducible inguinal hernia and may give rise to symptoms identical to that produced by hernia but without the presence of any detectable hernia sac[5] Using ultrasonographic scanning of the groin region will yield a spindle shaped

mass which is confined to the course of the inguinal canal and is echogenic in most of the cases[1] Presence of spermatic cord lipomas is generally accepted as an incidental finding during classic inguinal hernioplasty and they are managed either by pushing back or excision and the repair is conducted with or without the use of a mesh implant in the posterior wall of the inguinal canal for further strength. However, with the introduction of more advanced laparoscopic hernioplasty techniques and equipments more of these presumed lipomas are going to be overlooked with the possible persistence of the same symptoms postoperatively. It is well documented that missing of these lipomas is more frequent in laparoscopic transabdominal preperitoneal (TAPP) approach than with total extraperitoneal (TEP) one[6]

Patients and Methods

This study was conducted to assess the frequency and clinical significance of spermatic cord lipomas in a (150) case which had been submitted to (160) hernioplasty in male patients for the period February 2010 to February 2013 in Hilla General Teaching Hospital and Hayat Private Hospital. By essence and definition of this study, no female patients with inguinal hernia were included. Hernioplasty was performed by the classic open method with use of Lichtenstein mesh implant in (110) cases while the remaining (50) cases were repaired by total extraperitoneal laparoscopic hernioplasty (TEP). In both types of hernioplasty and for all cases we recorded

the site, type and the presence of any spermatic cord lipoma. Lipoma of the spermatic cord was defined as any recognizable, palpable mass (es) of fatty texture within the inguinal canal which always had a continuous connection with the retroperitoneal fat through the internal inguinal ring while the true lipoma is really an encapsulated spindle-shaped mass of lipocytes with a thin layer of fibrous tissue that can be so easily dissected out from the spermatic cord contents and at the same time has no connection with the retroperitoneal fat. Proper and complete history taking and physical examination were performed for all the operated upon cases but no preoperative ultrasonography was conducted on any of them. At either open or laparoscopic hernioplasty, lipomas were excised before completing the hernioplasty. All data obtained was collected and analyzed in an attempt to explore the incidence and the clinical significance of spermatic cord lipomas.

Results

The total number of operated upon cases was (150) with (160) hernioplasties performed. Of these (160) hernioplasty, (50= 31.25%) cases were operated laparoscopically while the remaining (110= 68.75%) cases were managed by classical Liechtenstein open repair. The age group was ranging from (13-77) years with a mean age of (27). The right-sided hernias were (94 =58.75%) while the left-sided hernias were (50 = 31.25%) and the bilateral inguinal hernias cases were (16 = 6.25 %). Indirect inguinal hernias were found in (125= 78.12%) cases while direct type was detected in (30 = 18.75%) cases. Recurrent hernias were demonstrated in (5= 3.12%) cases as is shown in table number (1). Generally speaking, spermatic cord lipomas were detected in (20 = 12.5%) cases among which only (2) cases were true lipomas from surgical pathology point of view i.e. it was a discrete, spindle-shaped fatty mass limited within the inguinal canal with no any connection to the retroperitoneal fat.

Classical open hernioplasty disclosed (19= 95%) cases of these total (20) while only (1= 5%) case was detected using laparoscopic hernioplasty. Regarding the (2) cases of true cord lipomas: one case only was associated with an indirect inguinal hernia. Twelve lipomas (60 %) were found on the right side and (8 = 40%) cases were on the left side. Fifteen cases (75%) of spermatic cord lipomas were associated with indirect inguinal hernias while the remaining (5 = 25%) cases showed no any type of associated hernia. These (5) cases were preoperatively diagnosed as cases of irreducible inguinal hernias. Fourteen (70%) of these (20) cases with spermatic cord lipomas were small-moderate in size retroperitoneal fatty prolongations through the deep inguinal ring and were limited to the inguinal canal while only in (5 = 25%) cases the lipomas were moderate-large in size extending down to the superficial inguinal ring. Only (1 = 5%) case showed lipomas extending through the superficial inguinal ring down into the upper scrotum.

Discussion

The presence of spermatic cord lipomas had been relatively considered as unimportant finding during hernioplasty procedures and accordingly it had been a less focused upon topic. The presence of spermatic cord lipomas had been generally considered as an accidental operative finding during hernioplasties and these masses of fatty tissues were managed by pushing back/resection/excision. At the era of laparoscopic surgery with the introduction of laparoscopic hernioplasty, spermatic cord lipomas become more susceptible to be overlooked during these laparoscopic procedures. Laparoscopic hernioplasty procedures are, relatively, newly used surgical modality when compared to the more popular and commonly practiced laparoscopic cholecystectomy. Nevertheless, they do gain popularity in the developing countries and more than (70%) of hernioplasties are now

laparoscopic[8] Laparoscopic hernioplasty modalities are either Total Extraperitoneal approach (TEP) or Transabdominal Preperitoneal approach (TAPP). TEP is considered to be more accurate than TAPP in intraoperative detection of spermatic cord lipomas [8,9,12] Flang DR *et al.* and MacDoland *et al.* reported an incidence (23%) for spermatic cord lipomas. This figure is more than what this study revealed. It seems that racial variation and obesity may be well associated with incidence of these lipomas [12,13] This study showed that there is a high association of indirect inguinal hernias with spermatic cord lipomas and our results are consistent with other reports [14,15] We revealed that incidence of True lipomas of the spermatic cord is also far less common than in other similar studies [16,17] The size and length of these lipomas had no relation with the patient age; a finding which is so close to results reported by others workers [18]

Conclusion

From surgical pathology point of view, true lipomas of the spermatic cord with an encapsulated, easily dissectable, discrete fatty collection that has no any connection with the retroperitoneal fat is not so common. Yet, the most commonly encountered is the *Misnomer* of spermatic cord lipomas i.e. prolongations/extentions of retroperitoneal fat along and within the spermatic cord contents. The introduction of laparoscopic hernioplasties techniques has conferred these incidental findings of fatty collections within the spermatic cord a specially important significance. Missed spermatic lipomas is a pitfall unique to TAPP hernioplasty. This problem is going to arise when there is a palpable inguinal mass detected preoperatively, but the intraoperative finding revealed no recognized hernial sac or any intraperitoneal defect and accordingly the procedure is going to be terminated with negative outcomes. As a result of these negative outcomes and with popularity of using laparoscopic hernioplasty these relatively unimportant finding has gained

more and more of surgical attention. The use of groin region preoperative ultrasound scanning with a high frequency and high resolution in selective cases of inguinal hernias is recommended when operators are embarking on a laparoscopic hernioplasty approach. Further works is also encouraged for a better understanding of these incidental findings and more exploration of their genesis.

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Table (1): Outcomes of the present study

Type of hernia and Repair	No. of cases	%	Side		Spermatic cord lipomas			True cord lipomas	
			Right	Left	Right	Left		Right	Left
<i>Indirect</i>	125	78.12%	87	45	9	3	= 12	1	1
<i>Direct</i>	30	18.75%	7	5	1	1	= 2	-----	-----
<i>Dual</i>	16	10%	10	6	2	1	= 3	-----	-----
<i>Recurrent</i>	5	3.12%	4	1	2	1	= 3	-----	-----
<i>Liechtenstein</i>	110	68.75%	80	30	14	4	= 18	1	-----
<i>Laparoscopic</i>	50	31.25%	40	10	1	1	= 2	-----	1