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Case report

INGUINAL HERNIA AND CONCOMITANT VARICOCELE
MIMICKING MESH COMPLICATIONR. G. Holzheimer¹, A. Schreiber²¹Center for Short Stay Surgery, Munich Sauerlach / Department of Surgery, Martin-Luther Universität Halle-Wittenberg,²Department of Urology, Krankenhaus Barmherzige Brüder, Munich, Germany

Abstract: In males inguinal hernia and varicocele are frequent diseases with a reported incidence of 1-2 % for hernia (Klinge 2000) and up to 20 % (Mickevicius et al. 2002) for varicocele. In 1997 approximately 220,000 inguinal herniotomies were performed in Germany (Horeysecck 1997). Leading symptoms in both diseases are complaints and dragging pain in the inguinal region radiating into the testis. Surgeons treat traditionally inguinal hernia whereas varicocele is the domain of urologists. Coincident appearance of inguinal hernia and varicocele is expected to be more frequent with regard to the pathogenesis (Friedman et al. 1993; Nakada et al. 1994; Rosch et al. 2002; Rovsing 1916; Santoro et al. 2000; Wagh and Read 1972). Therefore both surgeon and urologist should see patients with inguinal hernia or varicocele.

If patients with hernia repair postoperatively suffer from similar complaints again, it should not be interpreted rashly as mesh complication (Conze et al. 2001). The need for an improved assessment has been recognized (Kehlet et al. 2002). It sounds reasonable to assume, that quite a number of patients with complaints after successful hernia repair may suffer from an undiagnosed varicocele.

We present a case of inguinal hernia with mesh implantation and concomitant varicocele as an example for mesh-unrelated postherniorrhaphy pain.

Key words: Inguinal hernia; varicocele; mesh; Lichtenstein procedure; postherniorrhaphy pain

CASE REPORT

A 34 years old male presents with the typical symptoms of an acute left inguinal hernia. Intraoperative diagnosis consists of a direct hernia with defect of the posterior wall (Nyhus IIIa); an indirect hernia is excluded. The patient is treated according to the Lichtenstein procedure with mesh (VYPRO II, Ethicon Hamburg, Germany) under general anaesthesia. He receives one shot antibiotic prophylaxis (cephazolin 2g) and postoperatively diclofenac 100 mg for 3 days for pain

relief. The weeks after the operation neither intra-operative nor postoperative complications nor complaints about pain were reported. 5 months later the patient presents with complains in the left inguinal region, especially during sexual activity. After exclusion of a recurrent hernia or a mesh complication - e.g. inflammation, infection or dislocation - the patient is sent to the urologist for further evaluation. Palpation and inspection reveals no abnormalities of testis and spermatic cord; sonography of the left testis and epididymis shows a homogenic echo of the parenchyma. Duplexsonography excludes any damage to the vascular structure of spermatic cord and testis. At last during valsalva manoeuvre a significant reflux of the testicular vein into the enlarged veins of the plexus pampiniformis, typical for a varicocele, is demonstrated. The urologist recommends sclerotherapy of the varicocele.

DISCUSSION

Inguinal hernia is a frequent illness of the male (Klinge 2000). The incidence of male inguinal hernia in Great Britain is 2 % and in females 0.3 % (Keith 1923). In 1997 approximately 220.000 inguinal herniotomies were performed in Germany (Horeysecck 1997). Chronic pain of patients after herniotomy is often considered to be caused by intra-operative injury to the inguinal nerves (Kehlet et al. 2002) or mesh complication (Conze et al. 2001); however, other factors, e.g., concomitant and previously asymptomatic varicocele, may be involved when recurrence or mesh complication has been excluded as in our case. Others have found no evidence that mesh influences sexual function or testicular perfusion (Zieren et al. 2001). Varicocele, an abnormal enlargement of the veins of the plexus pampiniformis of the spermatic cord, was observed in 1-2% of males in older reports (Rovsing 1916). According to newer observations there may be an incidence of up to 20 % in young males (Mickevicius et al. 2002). There are no scientific reports available on the incidence of inguinal hernia and concomitant varicocele. The frequency and pathogenesis of both diseases in males may lead to the assumption that this coinci-

dence may happen more often than previously thought. Connective tissue alteration has been accused to support the development of inguinal hernia (Friedman et al. 1993; Klinge 2000; Rosch et al. 2002; Wagh and Read 1972) and varicocele (Nakada et al. 1994; Santoro et al. 2000). Similar to the varicose veins, a defect of the valves in the V. testicularis has been discussed as predisposition for the development of varicocele (Weinerth and Robertson 1997). Rovsing reported in 1916 that an inherited weakness of the venous system might be a disposition for varicocele, which is often accompanied by haemorrhoids and varicose veins (Rovsing 1916). In most standard texts varicocele is mentioned as differential diagnosis for the inguinal hernia; however, there is only limited information available on the treatment strategy in case of combined inguinal hernia with varicocele (Cobb 1994). In most instances the varicocele is located on the left side (Rovsing 1916), as reported in this case report. Inguinal hernia can be diagnosed clinically and by ultrasound; however, the varicocele may be diagnosed only by duplexsonography (grade 1: visible only by valsalva; grade 2: visible without valsalva; grade 3: varicocele visible under the skin) or CT scan (Hendriks et al. 1997; Lund et al. 1997). Not every inguinal hernia will need to be examined by duplexsonography; however, in case of postoperative pain after inguinal herniotomy a timely investigation with duplexsonography may allow early diagnosis and avoid infertility (Weidner 1998). Inguinal hernia repair is presently done in most instances according to the Shouldice or Lichtenstein procedure (Bloor et al. 2003; Gianom et al. 1998). Several options are available for the treatment of the varicocele: sclerotherapy (Bach et al. 1984), microsurgical subinguinal ligation of the varicocele (Yaman et al. 2000), or laparoscopic ligation of the varicocele (Hagwood et al. 1992; Hirsch et al. 1998). The ligation of the varicocele has led to a complete relief of pain in 86% of patients (Pettersson et al. 1998). However, a simultaneous repair of the varicocele and the inguinal hernia is considered to be a contraindication due to the danger to injure the vascular system of the testis (Schumpelick 2000).

CONCLUSION

Inguinal hernia and varicocele are frequent male diseases with similar complaints. They may appear coincidentally more often than previously thought due to similar pathogenesis. They differ, however, with regard to the necessary diagnostic steps: duplexsonography may be relevant for the diagnosis of a varicocele, and surgical clinical experience with regard to the differential diagnosis of inguinal complaints. Both the surgeon and the urologist should see patients with unclear or postoperative inguinal complaints. Postoperative chronic pain after inguinal hernia repair may not be caused by mesh but by a varicocele.

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