

# TESTICULAR ATROPHY FOLLOWING HERNIA REPAIR

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## INTRODUCTION

Ischemic orchitis progressing to testicular atrophy is one of the most devastating complications of hernia repair. It is also the most common cause of litigation after herniorrhaphy. The incidence of testicular atrophy is up to 0.5% after primary repair and up to 5% after recurrent hernia repair.

The primary etiology of testicular atrophy is surgical trauma to the testicular veins of the spermatic cord. This is especially likely to occur during dissection of a complete indirect sac from the cord. Delicate veins of the pampiniform plexus are injured and thrombose causing venous insufficiency of the testicle.

## CASE PRESENTATION

A 58 year old male with chronic pain in his right groin was referred to a general surgeon for hernia repair. The patient had a history of bilateral inguinal hernia repairs at age 19. Despite having no symptoms on the left, the surgeon suggested bilateral repair since "The left side will eventually pop out". The patient was not informed of the possible complications of bilateral repair or that the risk of complications were significantly higher since the patient previously had bilateral repairs. Specifically, there was no discussion of the risks of testicular atrophy or that consideration was given to staging the repairs. At surgery, the surgeon encountered a significant amount of scar tissue. Both indirect and direct hernias were found on the right but no hernia was found on the left. Following the surgery, the patient developed bilateral wound complications requiring drainage and antibiotics. He saw the surgeon multiple times over the next year with complaints of testicular swelling and pain followed by retraction of both testicles. Eventually, the patient saw a urologist and endocrinologist. He was found to have depression, decreased libido, hot flashes, loss of hair, gynecomastia and bilateral testicular retraction and atrophy. Laboratory tests showed a very low testosterone level. The patient was diagnosed with secondary testicular failure resulting from bilateral inguinal hernia repair.

Despite treatments with androgens, the patient has persistent loss of libido, depression, feminization, and groin pain. These events have significantly changed his life for the worse.

The patient initiated a lawsuit against the surgeon for injuries to the testicles and failing to obtain adequate informed consent.

## DISCUSSION

“The incidence of testicular atrophy can be dramatically reduced by limiting dissection trauma to the cord. This is accomplished simply by never, if possible, dissecting the distal portion of an indirect sac from the spermatic cord and never, if possible, dissecting the cord beyond the pubic tubercle for any reason. When necessary, dissection of the spermatic cord can be bypassed altogether by accessing the groin by an abdominal preperitoneal approach. The preperitoneal hernioplasty is indicated in patients with recurrent hernias to avoid retraumatizing a previously dissected and perhaps damaged spermatic cord.”(1)

Given the increased incidence of testicular atrophy after recurrent hernia repair, leaders in the field of hernia repair have suggested that “...it probably is ill advised to perform simultaneous bilateral indirect inguinal hernia hernioplasty if an indirect sac has been excised, for fear of causing bilateral testicular atrophy. Also, patients, especially in their reproductive years, who develop ischemic orchitis on one side should have surgical repair of a contralateral inguinal hernia postponed for at least a year until the final outcome of the ischemic orchitis is known.”(1) By corollary, it is obvious that a patient who has had previous bilateral inguinal hernia repairs should have staged operations for recurrences to avoid the potential for bilateral testicular atrophy. In this situation, serious thought should also be given to using a preperitoneal approach.

Although there are no strict guidelines, many medicolegal experts and surgeons believe that complications with an incidence greater than 1% should routinely be discussed with patients. Thus, few surgeons feel it necessary to discuss testicular atrophy with a patient who has a primary hernia. However, it is essential to discuss these complications with all patients who have recurrent hernias since the incidence is up to 5%. Furthermore, it is also advisable to inform all patients with previous groin or scrotal surgery why the preperitoneal approach by an abdominal incision is preferred to an anterior groin incision for repair of recurrent hernias.”(1)

## CONCLUSION

The medicolegal implications of testicular atrophy are obvious. Testicular atrophy should be a rare occurrence but is nonetheless more common in recurrent hernia repairs. This complication can be avoided by limiting dissection trauma to the cord. It is essential to discuss the potential for testicular atrophy with all patients who have recurrent hernias.

## REFERENCES

1. **Testicular atrophy and chronic residual neuralgia as risks of inguinal hernioplasty.** Wantz, GE, *Surg Clin North Am* 1993 Jun;73(3):571-81.