

## *Vaso-cutaneous fistula after vasectomy*

Meng Guan, A. Joel Dagnone, MD, Richard W. Norman, MD

Department of Urology, Dalhousie University, QE II Health Sciences Centre, Halifax, Nova Scotia, Canada

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*Vaso-cutaneous fistulae occur rarely after vasectomy. We*

*report three cases encountered in our hospital over the last 18 years and recommend technical considerations to avoid this complication.*

**Key Words:** vasectomy, fistula

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### Introduction

Vasectomy is a safe and effective method of permanent contraception for men. Typical complications include wound infection, scrotal hematoma, sperm granuloma, epididymitis, chronic epididymalgia and

spontaneous recanalization and are uncommon.<sup>1-3</sup> Rarely, has a post-operative vaso-cutaneous fistula been described after vasectomy<sup>3-5</sup> and we sought to review our experience.

### Case reports

Three cases out of approximately 7000 vasectomies were identified over an 18 year timeframe Table 1. In each case the bilateral vasectomy was performed under local anesthesia by a different urologist. The patients described no significant immediate post-operative problems but all developed a slightly

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Address correspondence to Dr. Richard W Norman, Queen Elizabeth II Health Sciences Centre, Victoria General Site, Victoria Building, 5 South, Room 293, 1278 Tower Road, Halifax, Nova Scotia, B3H 2Y9 Canada

TABLE 1. Characteristics of men developing post-vasectomy vasal fistulae

Age (years)	Number of scrotal incisions	Type of ligation material	Time to presentation post-vasectomy (weeks)
36	1	Cotton	52
37	2	Silk	3
42	1	Silk	13



Figure 1. Photograph showing vaso-cutaneous fistula on right side of scrotum.

indurated area on the scrotal skin in the area of the surgical site with puckering and persistent discharge Figure 1. On examination, the testicular end of the tied vas could be followed to the fistulous site on the scrotal skin. Surgical correction included excision of the involved ipsilateral vasal end. All patients were cured.

### Discussion

Vaso-cutaneous fistulae are rare. They have been attributed to a variety of causes including neurogenic bladder, scrotal trauma, endoscopic bladder neck resection and inguinal orchiectomy.<sup>5</sup> Two were recognized in a series of 4253 patients undergoing vasectomy with a no scalpel technique and silk ties.<sup>3</sup> One was reported 30 months after using clips to occlude the vasa.<sup>4</sup>

It is most likely that the major contributing cause to the formation of a vaso-cutaneous fistula after a vasectomy is failure to properly place the ligated or clipped ends of the vasa back into the hemiscrotum beneath the dartos fascia.<sup>3-4</sup> This may be a particular problem when titanium clips are used following a no scalpel procedure since the incision is very small and

the sharp ends of the clips tend to catch on the dartos fascia. If a suture is used to close the skin incision, there is a risk that it might be inadvertently placed through the vas pulling it to the scrotal skin and increasing the likelihood of fistula formation. The development of a sperm granuloma or wound infection may also predispose to a vaso-cutaneous fistula after vasectomy.<sup>4</sup> Our three patients and two from the literature had their vasa ligated with non-absorbable sutures.<sup>3</sup> It is not clear whether this may have led to an increased risk of fistula formation secondary to a localized inflammatory reaction or not, since, it is clear that these fistulas can develop when clips are used. Vaso-cutaneous fistulae may present within several weeks to years following the vasectomy and the more common complications such as post-operative hematoma or infection are not good predictors of occurrence.

In summary, vaso-cutaneous fistulae after vasectomy are rare. We believe the risk of formation may be minimized by careful, precise surgical technique paying particular attention to clipping the vasal ends, ensuring that the vasal ends are replaced into the scrotum beneath the dartos fascia and avoiding sutures to close the skin. □

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