

Penile Squamous Cell Carcinoma Diagnosed following Treatment of Urethrocutaneous Fistula after CO₂ Laser Therapy for Misdiagnosed Penile Lesion: Report of a Case

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= Abstract =

The complications of the treatment of penile lesion are wide ranging, urethrocutaneous fistula being one of the less common. This complication affects the ventral aspect of the penis. We present a rare case of urethrocutaneous fistula after vaporization of penile lesion by CO₂ Laser. One fistula was at ventral aspect of the penis. A 43-year-old male presented with passage of urine from one opening. He had undergone a vaporization by CO₂ laser, 2 times. Urethrocutaneous fistula repairs was performed with biopsy of the edge of fistula site. Squamous cell carcinoma was confirmed. He subsequently underwent a partial penectomy. It is very important that biopsy was performed before vaporization of even small size skin lesion. This case is reported along with a brief review of the literature.

Key Words: Cutaneous fistula, Penile disease, CO₂ laser

Carcinoma of the penis is rare disease (0.58/100,000) in the United state,¹ In developing countries, the incidence is relatively common, due in part to cultural and hygienic differences.^{2,3}

With the improvement of living standards and hygienic habits in recent years, the incidence of carcinoma of the penis is declining.¹ Several etiologic risk factors have been recognized in the development of this malignancy. Exposure to the human papillomavirus, lack of neonatal circumcision (especially when associated with phimosis), and exposure to tobacco, among other causes, have been implicated.^{3,4}

Neodymium:yttrium-aluminum-garnet (Nd:Yag) and CO₂ lasers have been used primarily in penile skin lesions, because Laser treatment of penile lesion has

several advantages. We described a rare case of urethrocutaneous fistula after treatment of CO₂ laser for penile lesion along with a brief review of the literature.

Case Report

A 43-year-old male presented with passage of urine from one opening at the distal portion ventral site of penile shaft near corona with irregular margin. A No. 16 Fr Foley catheter was inserted into bladder via external urethral orifice. He had been undergone a vaporization by CO₂ laser, 2 times at private clinic. The patient initially was mistook for a small size wart and was treated without diagnostic biopsy. After 1 month, penile lesion was recurrent at same site of first lesion of penile shaft and retreated by CO₂ laser without biopsy. After 1 week, during urination urine was passed ventral site of penis. He had neither other past medical history nor symptoms of the other lesion and denied any hematuria and urinary symptoms except

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urinary dribbling. On physical examination, there was one urethrocutaneous fistua which had clear margin without penile mass and no inguinal palpable lesions. Blood chemistry and urinalysis was normal range. Under spinal anesthesia, urethrocutaneous fistula repair and biopsy of the edge of fistula site were performed after a NO. 16 Fr Foley catheter was inserted. The result of biopsy was squamous cell carcinoma of the penis (Fig. 1). CT scan and bone scan revealed no abnormal finding. Partial penectomy without ilioinguinal lymph node dissection was performed (Fig. 2). Postop-

erative pathology investigations confirmed that it was a well-differentiated squamous cell carcinoma of the penis involving the skin nearby, whereas the surgical margin was negative (Fig. 3). Follow-up has consisted of 12 month CT scan and neither recurrence nor distant metastasis has been observed during a 12 month follow-up visit after complete therapy.

Discussion

Penile carcinoma is uncommon developed countries. The precise etiology of penile cancer remains obscure, but an association between the disease and the absence

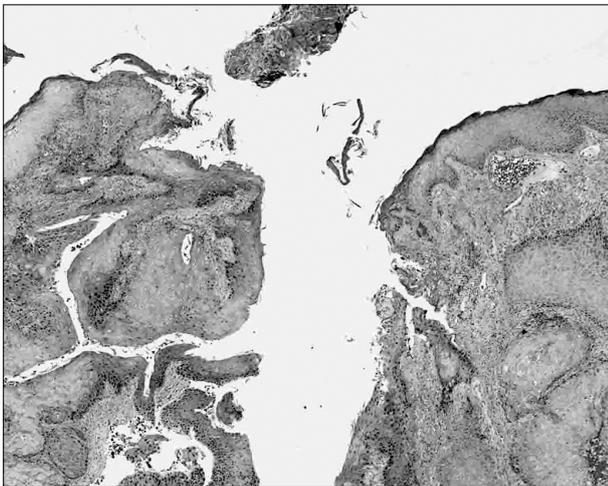


Fig. 1. The microphotograph of biopsied tissue shows infiltrating strands and islands of neoplastic squamous cells around the fistulous tract (H&E, $\times 40$).

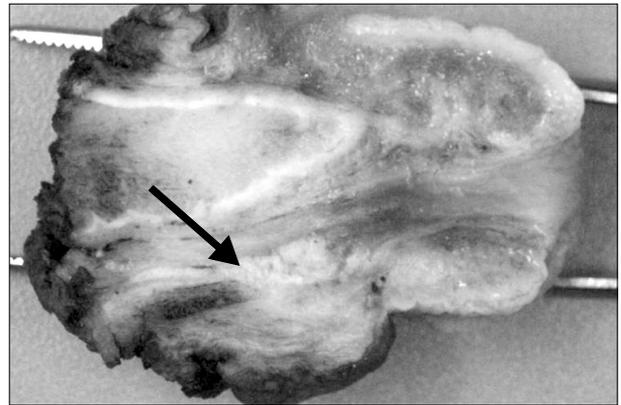


Fig. 2. This photography shows the cutting surface of partial penectomy. A arrow indicates the site of urethrocutaneous fistula repair.

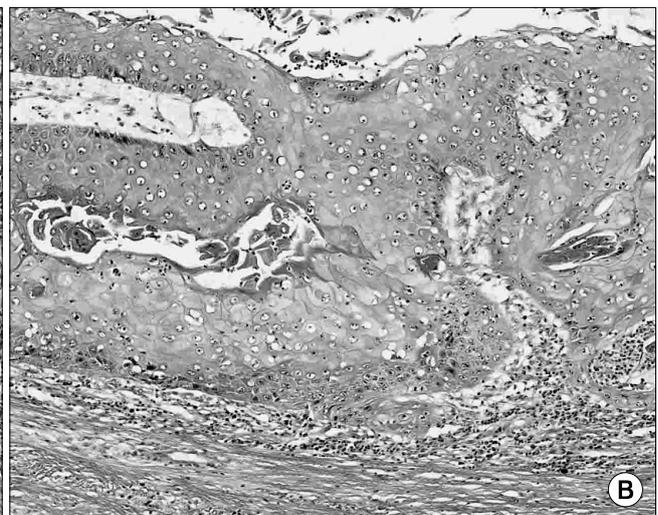
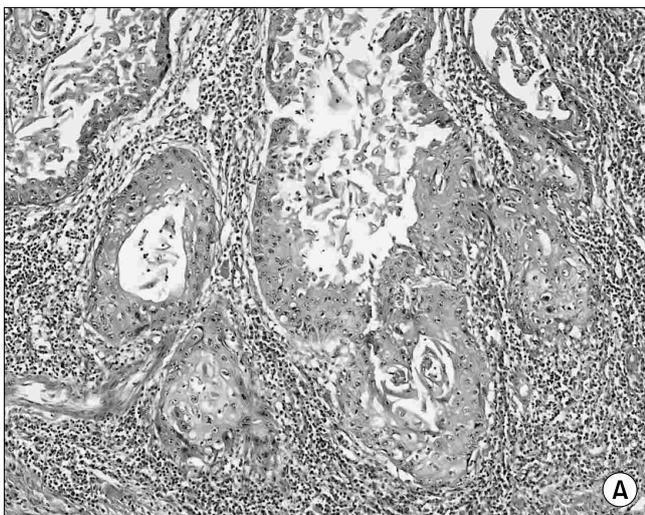


Fig. 3. Tissue sections from the penectomy specimen reveals well-differentiated squamous cell carcinoma (A: H&E, $\times 100$, B: H&E, $\times 200$).

of circumcision or poor hygiene is well established. Exposure to the human papillomavirus, and exposure to tobacco, among other causes, have been implicated.^{2,3}

Patient characteristics concerning age at onset, presenting clinical symptoms, the anatomic location of initial lesion, a delayed diagnosis and the stage of disease are agreement with most large series. The most common presenting symptoms were a mass and an ulcer, infrequently pain. The obvious psychological problem associated with genital disfigurement has prompted the development of organ sparing techniques. The treatments of penile carcinoma were photodynamic therapy, 5-Fluorouracil cream, cryosurgery with liquid nitrogen and Nd-YAG laser therapy.⁵⁻⁸ Laser treatment of T1 and T2 stage carcinoma penis has several advantages. During or post laser, there is no blood loss, pain relief is achieved with oral analgesics, there is no wound infection, and antibiotic administration is not required. Local treatment failure can be treated with repeat laser application, partial or total penectomy.⁸ Leijte et al⁹ reported retrospective multi-institutional series laser therapy, local incision, and radiotherapy were compared to partial or total penectomy. Local recurrence rates were higher with penile preservation compared to partial or total penectomy (27.7% versus 5.3). Five year disease specific survival in those who locally recurred was 92%, however, prompting the authors to conclude that there is little impact on survival from utilizing phallic preservation procedures. Stein and Kendall¹⁰ reported that seven patients with penile lesion were treated with laser therapy and, all had excellent results without complication. Our case had a complication of urethrocutaneous fistula after CO₂ laser therapy for penile lesion. Although there are many modality of treatment for penile skin lesion, it is important to evaluate penile lesion, such as penile papilloma, nodule, genital ulcerative lesion, condyloma and carcinoma. An early diagnosis is a major matter in order to avoid tumoral spread and mutilating surgery. As the therapeutic approach was conservative, many

of the pathological diagnoses were based exclusively on the tumor biopsy specimen.

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