

Successful Non-Operative Management Of Penile Wet Gangrene Following Self-Injection Of Heroin In Dorsal Vein Of Penis

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Citation

I Malek, C Parmar, J McCabe, P Irwin. *Successful Non-Operative Management Of Penile Wet Gangrene Following Self-Injection Of Heroin In Dorsal Vein Of Penis*. The Internet Journal of Surgery. 2006 Volume 11 Number 1.

Abstract

Commonly used illicit drugs that are administered parenterally include heroin and cocaine. Common sites of vascular access for intra-venous drug users are vessels of extremities. Once they are inaccessible due to repeated use eventually they move on to vessels of groin, neck and axilla. We report the first case where dorsal vein of penis was used as a vascular access by an intra-venous drug user that subsequently led to penile wet gangrene. The patient was managed non-operatively with a successful outcome.

CASE HISTORY

A thirty-five-year-old long term intra-venous drug user injected citric acid laced heroin into his dorsal penile vein which caused him worsening penile pain. He presented to hospital with the above history and examination revealed a dusky glans penis with mild induration at the injection site. There was no palpable inguinal lymphadenopathy. A diagnosis of superficial wet gangrene of the tip of glans was established and we decided to manage it non-operatively [Figure -1].

Figure 1

Figure 1



Worsening pain and difficulty in micturition necessitated urethral catheterisation. Antibiotics were given. Gradually

over four weeks, pain subsided and a clean line of demarcation of the necrotic external meatal area developed [Figure - 2]. This subsequently sloughed off with no residual significant defect over the glans by six weeks [Figure - 3].

Figure 2

Figure 2



Figure 3

Figure 3



The patient's catheter was removed. At twelve weeks follow-up an uroflowmetry study was done which showed no evidence of urethral stricture or meatal stenosis.

DISCUSSION

It is important to ascertain whether gangrene of male genitalia is dry or infected as the latter requires urgent intervention whereas in the former the patient does not require prompt emergency intervention but prompt surgical management. Ischemic penile gangrene mostly occurs in diabetics and uraemic patients in chronic renal failure (calciphylaxis). Treatment modality is controversial, varying from an expectant approach to early surgical intervention (distal or partial penectomy). Most reports suggest surgical intervention. [1,2,3,4] It is considered more appropriate in patients with sub-optimal host resistance due to chronic diseases. Literature shows a case report of localized gangrene of scrotum and penis following heroin injection into femoral vessels, which were treated with local excision, debridement and primary closure. [2] White WB et al. have reported a case of cutaneous ulceration in a heroin abuser. [3] Stein et al. advised that chronic renal failure patients with ischemic penile gangrene should be treated conservatively rather than surgically because of high mortality rate due to underlying vascular disease. [6]

The adulterating agents, usually quinine or other powders, used to dilute heroin (3,6-diacetate ester of morphine) are the cause of the sclerosing of the veins as well as lymphatic obstruction. Pathological examination also shows thrombosed arteries and veins and presence of foreign particulate matter in the tissues. [1]

The penis is supplied by end arteries. Arterial occlusion can cause distal necrosis similar to the ischemic gangrene noted in the digits of the extremities. Mummification of the glans can cause urethral obstruction. Patient may require suprapubic catheter to relieve it. [1]

Sometimes the vein is missed and there is extravasation of the drug subcutaneously or intracorporeally and may lead to acute cavernositis, priapism, penile subcutaneous hematoma, penile ulcerations and corporal fibrosis as well as Fournier's gangrene. [7]

We suggest our colleagues to be aware of drug abuse as a differential diagnosis of priapism, cavernositis, Fournier's gangrene and also in penile or external genitalia ulcer. [2,7] Evidence of heavy parenteral drug abuse is generally obvious. It is confirmed by history from the patient. A close monitoring of local area is advised. If otherwise fit and well the patients can be managed non-operatively with no significant morbidity or anatomical deformity.

ACKNOWLEDGEMENT

None of the authors had any external source of funding.

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