inguinal folds. He has been treated by oral buprenorphine chlorhydrate tablets (Subutex®) for a year. He acknowledged that the day before the consultation, he had injected crushed buprenorphine tablets into the right inguinal fold and experienced sudden pain immediately after injection. He denied any direct injection into the scrotum or the penis. Progressive worsening of the lesions and pain led to admission (at which time he was afebrile). Examination showed a black necrotic eschar of the scrotum and the base of the penis and painful fibrinous lesions with irregular borders along the inguinal folds (Fig. 1). No laboratory test could be performed because of the poor condition of the peripheral veins. An isolate of a cutaneous swab sample was positive for *Streptococcus sanguinis*. The patient was treated with oral pristinamycin (1 g, 3 times a day) for 2 weeks and local applications of sulfadiazine. The lesions improved markedly, but the remaining necrotic scrotal lesion necessitated surgical debridement, excision, and a full skin graft.

**Discussion**

Repeated intravenous drug injections are usually followed by progressive sclerosis of the peripheral veins, which prompts drug abusers to choose new sites for injection, and the groin (the so-called “groin hit”) is a well-known alternative. Some abusers may use the femoral vessels routinely for years before any complication occurs [3]. They may, however, deliberately inject directly into the femoral artery, which is the cause of several cases of penoscrotal necrosis after heroin injection into the groins reported in the literature [3–5]. Femoral injections lead to embolization through the superficial and deep external pudendal artery. The superficial external pudendal artery provides branches to the penis, which explains the penile necrosis in our case.

This patient’s clinical presentation is typical of the natural history of this entity, as previously described by Somers et al.: soon after injecting the drug in the groin, the patient experienced severe localized pain and edema, followed by the development of a leathery black necrotic eschar and lastly loss of the scrotal skin. Surgery may be necessary to excise the remaining necrosis [3]. All but one of the cases reported have involved men, but women addicts may also use this site for injection. Del Giudice et al. reported a similar case of cutaneous necrosis after buprenorphine injection into the pudendal artery in a 25-year-old woman [2]. Other reported complications after groin/genitalia drug injection include ecthyma gangrenosum [4], Fournier’s gangrene [3], and penile ulcers [6–8]. In the latter situation, drug abusers may have tried to inject heroin directly in the dorsal vein of the penis. Extravasation of the material is then complicated by penile ulcer [6–8].

Buprenorphine chlorhydrate is a semisynthetic partial opioid agonist designed for sublingual administration, used in Europe for substitution treatment in opiate addiction. However, drug addicts rapidly started to misuse buprenorphine with subcutaneous or intravenous injections [9]. Such misuse may be followed by various cutaneous complications such as abscesses, cellulitis, thrombophlebitis, and necrotizing livedo [2,10].

Our case should serve as a reminder that acute groin and genital-necrotizing ulcers in drug addicts should prompt questioning about potential femoral drug injection. Drug addicts usually acknowledge drug injection, which facilitates the diagnosis. Otherwise, the presence of linear cord-like hypo- or hyperpigmented scars on the arms, reflecting repeated injections along superficial veins (“tracks”) [1,3], should suggest the possibility of drug injection in the groin.

**Conflicts of interest**: none.

**References**


Nicolas Kluger, Céline Girard, Bernard Guillot, Didier Bessis
Service de dermatologie, hôpital Saint-Éloi, université Montpellier I, CHU de Montpellier, 34295 Montpellier cedex 5, France
Correspondence: Nicolas Kluger,
Service de dermatologie, hôpital Saint-Éloi, université Montpellier I, CHU de Montpellier, 80, avenue Augustin-Fliche, 34295 Montpellier cedex 5, France.
nicolaskluger@yahoo.fr
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