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Dorsal perforation of prepuce: a common end point of severe ulcerative genital diseases?

Somesh Gupta, Bhushan Kumar

Severe ulcerative genital diseases can cause destruction of the prepuce, glans, or sometimes of the whole penis (phagedena). We observed a characteristic pattern of partial destruction of the prepuce as a result of a wide variety of ulcerative genital diseases. Five patients, two with severe genital herpes, one with hidradenitis suppurativa, and two with donovanosis presented with perforation on the dorsal surface of the prepuce. In four of them, the glans protruded through the defect and in one, the defect was not large enough to allow protrusion of the glans. In two patients, the preputial sac was obliterated. The relatively decreased blood supply of the prepuce is the probable explanation for perforation at this selective site.

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Keywords: prepuce; genital ulcer

Introduction

Genital ulcers causing rapid destruction of the glans and the prepuce or sometimes of the whole penis (phagedena) have been known since antiquity. Both sexually and nonsexually transmitted infections have been found to be associated with such a severe destructive process. We observed a characteristic pattern of the partial destruction of the dorsal prepuce, leading to perforation due to entirely unrelated aetiologies. Five such cases are reported here.

Case reports

CASE 1

A 31 year old man, a known HIV positive patient, presented with severe painful genital ulcers. Examination revealed large, well-defined erosions with irregular margins, distributed over the glans, prepuce, and shaft of the penis. The inguinal lymph nodes were enlarged and tender. A diagnosis of genital herpes was made after exclusion of other STDs by relevant investigations and the patient was started on oral aciclovir at a dose of 400 mg five times a day. The patient defaulted on follow up and drug compliance could not be confirmed. On examination, the prepuce had perforated from the dorsal surface and the glans protruded through it. The remaining part of the preputial sac healed with fibrosis leading to the obliteration of the sac.

CASE 2

A 28 year old man, a diagnosed case of hidradenitis suppurativa, presented with abscesses and discharging sinuses in both axillae, right arm, groin, and scrotum associated with moderate fever. He also had one discharging sinus over the dorsum of the prepuce. Examination revealed maceration in the whole inguinal region with foul smelling seropurulent discharge. A false passage in the preputial sac was present from which the glans was protruding. The patient was more worried about his basic disease and was not much concerned about the deformity of the penis. No extra treatment was given other than that for hidradenitis suppurativa.

CASE 3

A 26 year old man presented with preputial perforation on its dorsal aspect, through which the glans was protruding (fig 1). The patient gave history of an ulcer on the undersurface of the dorsal prepuce of about 1½ months’ duration, which was mildly painful and bled easily on touch. He received some antibacterial agents but without much relief. The dorsal aspect of the prepuce was ultimately eaten up by the ulcer through which the glans

Figure 1 Dorsal preputial perforation, possibly due to donovanosis.
protruded. An ulcer with healthy granulation tissue was present over the prepuce and the adjacent exposed part of the coronal sulcus. The clinical picture was suggestive of donovanosis. The tissue smear for Donovan bodies was negative and all the other STIs were excluded by the appropriate tests. The patient was empirically treated with doxycycline for 3 weeks with the diagnosis of donovanosis. His lesion healed but the deformity persisted.

CASE 4
A 29 year old man presented with two ulcers on the penis, which had appeared around 2 months earlier. The treatment he took failed to heal the lesions and one of them eroded a part of the foreskin. Examination revealed a swollen penis with a circular hole on the dorsal aspect of the prepuce through which an ulcer on the glans was visible. The ulcer had raised margins with central depression. Another ulcer was present on the intact preputial skin on the ventrolateral aspect. This ulcer had exuberant granulation tissue and a well defined margin. A clinical diagnosis of donovanosis was made which was confirmed by demonstration of the Donovan bodies in the tissue smear. Other investigations including those for syphilis, chancre, and HIV were negative. The patient was treated with doxycycline 100 mg twice daily for 6 weeks. The ulcers healed, though the circular defect in the prepuce persisted. The patient was not much concerned about the anatomical defect in the prepuce.

CASE 5
A 24 year old man, a known HIV positive patient, presented with a fibrosed foreskin. He gave a history of recurrent ulcerations on the prepuce and the glans for past 2 years which healed each time with treatment with aciclovir. The patient was unable to explain the deformity at the time of presentation. Examination revealed a fibrosed and obliterated prepuce positioned on the ventral aspect. The glans protruded through a large defect on the dorsal aspect. All relevant investigations were not contributory. A diagnosis of recurrent genital herpes was made considering the history and response to the aciclovir therapy.

Cases 1 and 5 were HIV antibody positive. All patients with STIs were heterosexual and did at times indulge in the unsafe sexual practices. All were advised circumcision. All were not much concerned about their anatomical deformities.

Table 1 Summary of the reported and present cases of dorsal perforation of prepuce

<table>
<thead>
<tr>
<th>No</th>
<th>Age (years)</th>
<th>Suspected cause of perforation</th>
<th>Protrusion of glans through the defect</th>
<th>Obliteration of preputial sac</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24</td>
<td>?Warts</td>
<td>No</td>
<td>No</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>27</td>
<td>?Donovanosis</td>
<td>Yes</td>
<td>No</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>35</td>
<td>Unknown</td>
<td>No</td>
<td>No</td>
<td>4</td>
</tr>
<tr>
<td>4</td>
<td>31</td>
<td>Genital herpes</td>
<td>Yes</td>
<td>Yes</td>
<td>Present report</td>
</tr>
<tr>
<td>5</td>
<td>28</td>
<td>Herpes simplex virus</td>
<td>Yes</td>
<td>Yes</td>
<td>Present report</td>
</tr>
<tr>
<td>6</td>
<td>26</td>
<td>?Donovanosis</td>
<td>Yes</td>
<td>No</td>
<td>Present report</td>
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<tr>
<td>7</td>
<td>29</td>
<td>Donavanosis</td>
<td>No</td>
<td>No</td>
<td>Present report</td>
</tr>
<tr>
<td>8</td>
<td>24</td>
<td>Genital herpes</td>
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<td>Yes</td>
<td>Present report</td>
</tr>
</tbody>
</table>
In conclusion, the dorsal perforation of the prepuce is a sequel of the genital ulcer diseases due to a wide variety of aetiologies. It is probably related to the vulnerability to necrosis of the part that has relatively less blood supply. Awareness of this presentation among genitourinary physicians and dermatologists should encourage more studies and reports.

Contributors: Both authors are engaged in the running of the STD clinic on the regular basis. The collection of the materials and the writing of the manuscript are undertaken collectively by both.

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