any individuals are misinformed or unaware of basic information about sexuality and have sexual concerns or questions on penile size. The “small penis syndrome (SPS)” may be defined as an anxiety about insufficient penile size despite the clinical examination being normal, and it may be associated with a psychiatric condition. In such men from different cultures with the focus on “bigger is better”, misinformation or myths may lead to uninformed sexual decisions, or interventions with serious consequences, such as the injection of exogenous substances into the penis, that can lead to significant complications requiring extensive medical or surgical treatment.1,2
In this report, we present a case of a penile cellulitis due to self-injection of a non-injectable penile enlargement cream by a medicinal person and its medical treatment. Terminology use in our article conforms to the standards recommended by Sexual Medicine.3

CASE REPORT

A 50 year-old man who has suffered of penile pain and swelling had counseled our clinic from emergency service. In his medical history, he admitted a self-injection of a non-medical enlargement cream (Mega Penis Enlargement / Enlarging Cream, imported from France) into subcutaneous tissue of his penis for the purpose of penile augmentation, even though its manufacturer describes usage of the product just by applying the cream over the entire length of the penis and massaging penis with it. Approximately 3-4 hours later he had a pain, swelling and fever in his genitalia. He had a temperature of 40°C. In physical examination, penis was circumcised and there were erythema, warmth, pain and swelling in penis while the scrotum was normal. Especially proximal ventral side and distal dorsal side of the penis swelling were more remarkable (Figure 1). Penile shaft was massively enlarged however; he was still able to pass urine. In his medical history, there was no other comorbidity such as, diabetes mellitus, coronary heart disease, etc. No other focus of infection in the genito-perineal area was detected.

In laboratory investigation, a complete blood count revealed white cell count of 31.4x10^3/microL with neutrophilia of 27.46x10^3/microL (87.4%); routine biochemistry was normal. In his penile ultrasound evaluation, corpus cavernosum and bilateral corpus spongiosums were normal and there was subcutaneous edema and heterogeneous appearance with the increase of bloody but. Urine analysis and culture showed no evidence of infection. And in his history of the patient, there was no known comorbidity and no suspicious sexual relationship with anybody.

The patient was diagnosed with penile cellulitis due to self-injection of a non-injectable topical cream. Intravenous appropriate antibiotherapy (ceftriaxone 2 gram/day) and eight-seance hyperbaric oxygen therapy (HBOT) at 2.5 atmospheres absolute pressure (ATA) was planned.

Third day of the treatment white blood cell decreased significantly and inflammation findings in the penis also regressed. Seventh day of the treatment white blood cell decreased in its normal degree and the penis view decreased approximately normal (Figure 2). The patient was discharged with the suggestion of routine control. In his first year routine control, there was no late complication or inspection problem.

DISCUSSION

With the use of invasive treatment like intracavernosal or subcutaneous penile self-injection for the purpose of penile augmentation, some possible complications such as penile cellulitis, penile abscess and the worse form of these, fournier gangrene may occur.

Over time, various types of agents such as paraffin, silicon, vaseline, metallic mercury, methacrylate, subcutaneous stone, autologous fat and cod liver oil have been tired. The complications of these agents were generally treated with surgical procedures.4-16

Self-injection for penile augmentation becomes more remarkable with the cause of easy application. In the literature there are few case reports for self-injection for penile augmentation.
However most of these were treated with surgical procedures except of three ones (Table 1). Akkus et al has reported a case of mineral oil (vaseline) self injection treated with local therapy (intraleisonal triamcinolone and hot water baths) because of the patient’s refusal surgery. Rosenberg et al and Coskuner et al have also reported cases treated with only intravenous antibiotherapy. 17-19

HBOT is an adjuvant wound therapy that has been suggested to be beneficial for the healing of wounds for over 40 years.20 Oxygen (O₂) is distributed to the tissues through the pressure gradient; tissue hyper-oxygenation has anti-inflammatory and painkilling effects, it increases bacterial permeability to antibiotics, strengthens neoangiogenesis, reinforces lymphocytes and macrophages function, augments testosterone secretion (in males), and finally enhances wound healing process.21 Shaw et al. has reported that HBOT in addition to antibiotic therapy may decrease healthcare cost and save lifes in severe soft tissue infection treatment in the long run.22 In our case, because of the cream sterility is unknown and the risk of fournier gangren due to superinfection of the penile soft tissue, HBOT was planned in addition to antibiotic therapy.

We present our unique experience in one patient who have been successfully managed conservatively with appreciate antibiotic and HBOT. We suggest that immediate removal of penis skin with or without scrotum skin may occasionally be instituted only in difficult cases where tissue healing is not possible. To our knowledge, this patient represent the first of such cases reported that treated with antibiotic and HBOT in the literature to date, which unfortunately remains scant. Although our experience from this case cannot be generalizable across all such patients, larger prospective series concerning patient selection for salvaging functional penis tissue may be warranted.

**Conflict of Interest**

Authors declared no conflict of interest or financial support.

**Authorship Contributions**

Article writing, discussion and literature review: Sercan Yilmaz; IDea, design and analysis: Engin Kaya, Bilal Fırat Alp; Critical review: Emin Aydur, Ibrahim Yıldırım.

### TABLE 1: Literature characteristics.

<table>
<thead>
<tr>
<th>No</th>
<th>Author</th>
<th>No. of Patient</th>
<th>Material Used</th>
<th>Treatment</th>
<th>Injection By</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cohen et al1⁶</td>
<td>CR</td>
<td>Mineral oil (vaseline)</td>
<td>Surgery</td>
<td>Self injection</td>
</tr>
<tr>
<td>2</td>
<td>Wiwanitkit²³</td>
<td>8</td>
<td>Olive oil, Vaseline, Paraffin</td>
<td>Surgery</td>
<td>Self injection</td>
</tr>
<tr>
<td>3</td>
<td>Akkus et al¹⁷</td>
<td>CR</td>
<td>Mineral oil (vaseline)</td>
<td>Local therapy</td>
<td>Self injection</td>
</tr>
<tr>
<td>4</td>
<td>Rosenberg et al¹⁸</td>
<td>3</td>
<td>Mineral oil (vaseline)</td>
<td>Atb therapy (Surgery for 2 not reported patients)</td>
<td>Self injection (2 Not reported)</td>
</tr>
<tr>
<td>5</td>
<td>Margil et al²⁴</td>
<td>CR</td>
<td>Silicone</td>
<td>Surgery</td>
<td>Self injection</td>
</tr>
<tr>
<td>6</td>
<td>Coskuner et al¹³</td>
<td>CR</td>
<td>Hyaluronic acid gel</td>
<td>Surgery</td>
<td>Self injection</td>
</tr>
<tr>
<td>7</td>
<td>Song et al²⁰</td>
<td>CR</td>
<td>Petroleum jelly (vaseline)</td>
<td>Surgery</td>
<td>Self injection</td>
</tr>
<tr>
<td>8</td>
<td>De Slati et al²⁶</td>
<td>CR</td>
<td>Paraffin</td>
<td>Surgery</td>
<td>Self injection</td>
</tr>
<tr>
<td>9</td>
<td>Schoiten et al²²</td>
<td>CR</td>
<td>Paraffin and Petroleum jelly</td>
<td>Surgery</td>
<td>Self injection</td>
</tr>
<tr>
<td>10</td>
<td>Mouraviev et al²³</td>
<td>CR</td>
<td>Crystalline Cocaine</td>
<td>Surgery</td>
<td>Self injection</td>
</tr>
<tr>
<td>11</td>
<td>Present Case*</td>
<td>CR</td>
<td>Non-medical Cream</td>
<td>Atb &amp; HBOT</td>
<td>Self injection</td>
</tr>
</tbody>
</table>

**CR**: Case report; **PA**: Penile augmentation; **Atb**: Antibiotic; **HBOT**: Hyperbaric oxygen therapy.
REFERENCES