Posttraumatic high-flow priapism treated with superselective arterial coil embolization: case report and literature review

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Disclosure

Speaker name:

**Bianca Marinelli Teixeira MD**

I have the following potential conflicts of interest to report:

- [ ] Consulting
- [ ] Employment in industry
- [ ] Stockholder of a healthcare company
- [ ] Owner of a healthcare company
- [ ] Other(s)

☑️ I do not have any potential conflict of interest
Introduction

• **Priapism**: penile erection that persists for more than 4 hours and is beyond, or is unrelated to, sexual interest or stimulation

• **Classification**
  • Ischemic (veno-occlusive, low flow)
  • **Nonischemic** (arterial, high flow)

Case report

• 45 year-old male
• Posttraumatic priapism
• Painless partial erection for 7 days
• No recovery with conservative management
• Color Doppler ultrasound suggested high-flow arterio-venous fistula
Selective catheterization of left IIA
Selective catheterization of left IIA
Selective catheterization of right IIA
Selective catheterization of right IIA
Selective catheterization of right EIA
Opacification
Superselective catheterization
Opacification
First microcoil
Second microcoil
Results

- Occlusion of the lesion
- Immediate significant detumescence of the penis
- No loss of erectile function
**Discussion**

- **Recommendation for the treatment of arterial priapism - European Association of Urology**

<table>
<thead>
<tr>
<th>Recommendation</th>
<th>GR</th>
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<tbody>
<tr>
<td>The management of high-flow priapism is not an emergency and definitive management can therefore be considered</td>
<td>B</td>
</tr>
<tr>
<td>Conservative management includes the use of ice applied to the perineum or site-specific perineal compression. It may be successful particularly in children</td>
<td>C</td>
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<tr>
<td>Selective artery embolization, using temporary or permanent substances, is the suggested treatment modality and has high success rates</td>
<td>B</td>
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<tr>
<td>The recurrence of arterial priapism following selective artery embolization requires the procedure to be repeated</td>
<td>B</td>
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<tr>
<td>The preservation rate of sexual function is about 80%. No definitive statement can be made on the best substance for embolization in terms of sexual function preservation</td>
<td>C</td>
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<tr>
<td>Selective surgical ligation of the fistula should be reserved as a last treatment option when embolization has failed</td>
<td>C</td>
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Discussion

- Review of literature – last 10 years
  - HFP and embolization: 24 papers
  - 41 case reports – 3 excluded
- Average age: 23.6 (2y– 65y)
- Cause:
  - 87% posttraumatic
  - 11% idiopathic
  - 2% unknown
Discussion

- With a maximum of three sessions all patients were successfully treated.
- All cases of recurrence (23%) involved absorbable material
- Impaired erectile function: 8%
  - 2 cases treated with nonabsorbable material and 1 with absorbable.
Conclusion

• Transarterial embolization appears to be a safe and effective treatment for managing patients with high-flow priapism.

• More studies are needed to find the safest and best agent for the treatment of high flow priapism without compromising erectile function.
Thank you!
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