Medical Illustration - A Pictorial Essay Visual Illustration of Obstetric Anal Sphincter Injuries (OASIS) Degrees of Severity, a Picture is Worth a Thousand Words

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Abstract

Keywords

► obstetric anal sphincter injuries (OASIS)
► anal sphincter
► perineal tear
► faecal incontinence
► diagnostics
► treatment

Introduction

Obstetric anal sphincter injury affects about 5.7% of primiparous women who deliver vaginally. Perineal injury during childbirth is a common event with important morbidity associated with third- and fourth-degree perineal tears (also referred to as obstetric anal sphincter injuries—OASIS). As there was a lack of consistency in the classification of a partial anal sphincter injury, with up to 33% of consultant obstetricians classifying a complete or partial tear of the EAS as a second-degree tear.

As there was a lack of consistency in the classification of a partial anal sphincter, with up to 33% of consultant obstetricians classifying a complete or partial tear of the EAS as a second-degree tear. Sultan devised a more specific classification, later adopted by the WHO and the International Consultation on Incontinence. In this classification, grade 3 is further refined as involving the anal sphincter complex and is divided into 3a, 3b, and 3c (►Table 1).

The type of third-degree tear seems to have an impact on symptoms, with OASIS grades 3a and 3b having a better prognosis than 3c. In fact, those with a 3c OASIS had symptoms similar in severity to those with a fourth degree laceration.

A button-hole injury, where only the vaginal and rectal mucosa are involved, should not be reported as a third- or fourth-degree tear if found in isolation. Documentation of the presence or absence of a tear, as evidenced on rectal examination, should be disclosed to the patient, and

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incorporated into the delivery note, and repair should be done to avoid fistulization.

The World Health Organization classification should be used to classify obstetrical anal sphincter injury. This distinguishes the degree of external sphincter tear (3a: < 50% or 3b: ≥ 50%) and the presence of internal sphincter defects (3c). A button-hole injury is distinct and should be classified separately as such. → Table 1

Such a grading system considers the degree of tearing experienced by the external sphincter separately from that of the internal sphincter. Such distinction is meant to improve reporting, guide repair, and facilitate outcome research.  

**Table 1** WHO Classification of OASIS

<table>
<thead>
<tr>
<th>Degree</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Injury to perineal skin only</td>
</tr>
<tr>
<td>Second</td>
<td>Injury to perineum involving perineal muscles but not involving the anal sphincter</td>
</tr>
<tr>
<td>Third</td>
<td>Injury to perineum involving the anal sphincter complex:</td>
</tr>
<tr>
<td>3a</td>
<td>Less than 50% of EAS thickness torn</td>
</tr>
<tr>
<td>3b</td>
<td>More than 50% of EAS thickness torn</td>
</tr>
<tr>
<td>3c</td>
<td>Both EAS and IAS torn</td>
</tr>
<tr>
<td>Fourth</td>
<td>Injury to perineum involving the anal sphincter complex (EAS and IAS) and anal epithelium</td>
</tr>
</tbody>
</table>


**Conclusion**

We hope that providing such a simple, diagrammatic digital illustration of anal sphincter injuries might be very helpful to fully understand, appreciate, and differentiate between each grade of anal sphincter injury, especially in performing primary repairs of these injuries which will be eventually reflected in on the proper diagnosis, management, and better outcomes.

**Declaration of Interest Statement**

There are no relevant financial or non-financial competing interests to report.

**Abbreviations**

OASIS: obstetric anal sphincter injuries, AI: anal incontinence, EAS: external anal sphincter, IAS: internal anal

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References