## Initiating a Staff Education Program on Obstetrical Anal Sphincter **Injuries (OASIS) to Improve Knowledge on Laceration Repair**

**HEALTH CARE** 

Melissa J. Yannetti, DO<sup>1</sup>, Elizabeth G. Lindsey, DO<sup>1</sup>, John M. Popovich, Jr., PhD, DPT, ATC<sup>2</sup>

1. Obstetrics and Gynecology Residency Program, McLaren Greater Lansing, 2. Center for Neuromusculoskeletal Clinical Research, College of Osteopathic Medicine, Michigan State University

#### Introduction and Background

- Obstetrical anal sphincter injuries (OASIS) lacerations are complications that put patients at risk of wound breakdown and infection, with associated elevated levels of pain that can persist up to 12 weeks postpartum.
- **Despite their importance and relatively high** frequency in obstetric care, the current knowledge regarding the prevention, management, and longterm outcomes of OASIS is limited.

#### Aim Statement

- The objective of this project is to improve the knowledge base for recognizing, repairing, and managing OASIS repairs among our obstetrical providers at McLaren Greater Lansing.
- This ultimately aims to improve clinical outcomes for patients with third- and fourth-degree perineal lacerations, decrease cost associated with sequelae of OASIS complications including readmission for wound breakdown or fistula repair, and improve training in evidence-based practice in this area of Obstetrics and Gynecology (OB/Gyn) medicine.

#### Methods

- A total of 16 obstetric providers (10 residents; 6) attending physicians) participated.
- Participants completed a pre-test survey on current best practice recommendations on each aspect of OASIS repair, followed by an educational program on OASIS, and a subsequent post-test.
- The survey questions were adapted from Hammond (American Journal of Obstetrics and Gynecology, 2021) and administered through Google Forms.
- Pre-test and post-test scores were determined by the percentage of questions correct (out of 16 points maximum).
- **Dependent samples t-test and the McNemar test** were used to determine differences in pre-test and post-test outcomes. Statistical significance was set at p<0.05.

#### Results

- ♦ Of 16 participants, 12 (75%) had prior OASIS training; however, only 7 (43.8%) reported it was adequate.
- The mean pre-test score was 11.6±1.2, with only 3 scoring ≥80%. Most answered incorrectly on topics including best interventions for anal sphincter injuries (n=13) and third-degree tear repairs (n=12).
- Following the education program, post-test scores improved significantly (p < 0.001); the mean post-test score was 15.2±1.2, with 15 participants (93.8%) scoring ≥80% (p<0.001).



Fig.1. Summary of test results before and after educational program on OASIS repairs was administered.

#### Table 1

| TABLE 1                        | Class      | ification of perineal la   |
|--------------------------------|------------|--|
| Laceratio<br>Classifica        | n<br>Ition | Definition   |
| First degr                     | ee         | Laceration of the vaginal ep   |
| Second degree                  |            | Involvement of the perineal  |
| Third degree<br>3a<br>3b<br>3c |            | Disruption of the anal sphin<br>< 50% thickness of sph<br>> 50% of sphincter torr<br>Internal sphincter also t |
| Fourth degree                  |            | Disruption of anal epitheliun  |

\*Developed by Dr. Sultan<sup>5</sup> and adopted at the reVITALize Obstetric Data Definitions Conference that was convened by the American College of Obstetricians and Gynecologists in 2012 to develop and standardize national obstetric clinical data definitions in 2012

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|    | Passing Score (≥80%) |
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Improvement

cerations\*

oithelium or perineal skin only

muscles but not the anal sphincter

nincter torn

torn

#### Discussion

- ✤ Lack of evidence for a detailed single approach to the repair of third- and fourth- degree perineal lacerations results in a wide variety of repair techniques taught to the OB/Gyn residents.
- Improvement in scores between the initial pre-test and post-test demonstrates that a one-hour selfguided PowerPoint presentation improved obstetric provider's knowledge of best practice guidelines.
- **While we expected varying levels of improvement** from pre- to post-test, the majority (n=15/16) of participants scored ≥ 80% on the post-test.
- Education to obstetric providers on the existing randomized control trials regarding diagnosis, repair techniques, and outcomes that support certain methods in practice can improve training in evidence-based practice in this area of OB/Gyn medicine.

### Conclusions

- ✤ A formal educational program on best practices regarding OASIS lacerations significantly improved both obstetrical resident and attending knowledge within our residency program.
- These findings support the need for structured, evidence-based training on complications and procedures within our residency that lack a single detailed approach to evaluation and management.

#### References

- Schmidt, Payton C. et al. Repair of episiotomy and obstetrical perineal lacerations. American Journal of Obstetrics & Gynecology, Volume 230, Issue 3, S1005 – S1013
- 2. Prevention and management of obstetric lacerations at Vaginal Delivery. ACOG. (2018, September). https://www.acog.org/clinical/clinical-guidance/practicebulletin/articles/2018/09/prevention-and-management-of-obstetric*lacerations-at-vaginal-delivery*
- 3. Hammond RK, Naidoo TD. The knowledge and perceptions of healthcare workers regarding obstetrical anal sphincter injuries. A practice audit from a resource-constrained setting. AJOG Glob Rep. 2021 Sep 25;1(4):100021.

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