

# The evolution of transperineal ultrasound findings of the external anal sphincter during the first years after childbirth.

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## Abstract

**INTRODUCTION AND HYPOTHESIS:** Obstetric anal sphincter injuries (OASI) are a major form of maternal birth trauma. Ultrasound imaging is commonly used to evaluate the condition. We undertook a study to compare the sonographic appearance of the external anal sphincter (EAS) 3 to 6 months and 2 to 3 years after a first birth.

**METHODS:** A retrospective analysis of data of primiparous women obtained in a prospective perinatal imaging study. Women were invited for postnatal assessment 3 - 6 months and 2 - 3 years after a first delivery. All had completed a standardized questionnaire, and had undergone clinical examination and translabial 4D ultrasound imaging. A "significant" EAS defect was diagnosed if four out of six slices on tomographic ultrasound imaging showed a defect of  $\geq 30^\circ$  circumference.

**RESULTS:** Datasets of 76 women with complete data and no intervening birth were assessed. Their mean age was 30.0 years (range 19.5 - 45.3 years) at the time of antenatal assessment. They were delivered at a mean gestation of 40 weeks (range 37 - 42 weeks), by caesarean section in 19, normal vaginal delivery in 42, vacuum delivery in 14 and forceps delivery in 1. A significant EAS defect on transperineal ultrasound imaging was found in 13 of 57 women (23 %) at an average of 4.7 months and in 12 of 57 (21 %) at a mean 26.4 months after a first vaginal delivery.

**CONCLUSIONS:** In this cohort of primiparous women after a term singleton delivery, we found only minor improvement in sonographic appearance of the EAS between 4.7 months and 26.4 months on transperineal ultrasound imaging, arguing against any significant degree of structural recovery during this time period.