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Postpartum evaluation of the anal sphincters using 4D TPUS with TUI after primary repair of obstetric anal sphincter injuries (OASIS)

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OBJECTIVE

This study aims to determine the ultrasound findings of the anal sphincters among women with OASIS using 4D TPUS (transperineal ultrasound) with TUI (Tomographic ultrasound imaging) done 10-12 weeks postpartum.

METHODS

This is an ambispective cohort study involving fifteen primipara with primary repair of OASIS in Southern Philippines Medical Center between July 2024 and May 2025, They were evaluated 10-12 weeks postpartum with a standardized interview using the Jorge and Wexner Scale for Obstructed Defecation Syndrome followed by a 4D TPUS with TUI to evaluate the anal sphincters for significant defects. Data was analyzed using frequency & percentage for categorical data and mean and standard deviation for continuous data.

REFERENCES:

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RESULTS

Of the 78 women with OASI recruited during the study period, only 15 (19%) underwent 4D TPUS with TUI after at least 10 weeks postpartum. The 3 (20%) who initially had a clinical diagnosis of a 3A tear had no anal sphincter defect on 4D TPUS. Among the remaining 12 (80%) with anal sphincter injury (*Table 1*), 8 (53%) had a 3A tear, 2 (13%) had a 3B laceration, and 1 (7%) each had a 3C and a 4th degree tear; Residual sphincter defects / failed primary repair were noted in 4 or 33% (1 with anal incontinence) while 8 (67%) had repaired anal sphincter defects. (*Figure 1*)

Anal Sphincter Complex	Values (N=12) 100%
I. Residual Anal Sphincter Defect	
Present	4 (33%)
Absent	8 (67%)
II. Status of OASI Repair	
Repaired	8 (67%)
Unrepaired / Failed Primary Repair	4 (33%)
III. Anal Mucosa	
Normal	11 (92%)
Abnormal	1 (8 %)

Table 1. Status of the Anal Sphincter Complex of patients with OASIs by 4D TPUS with TUI 10-12 weeks postpartum.

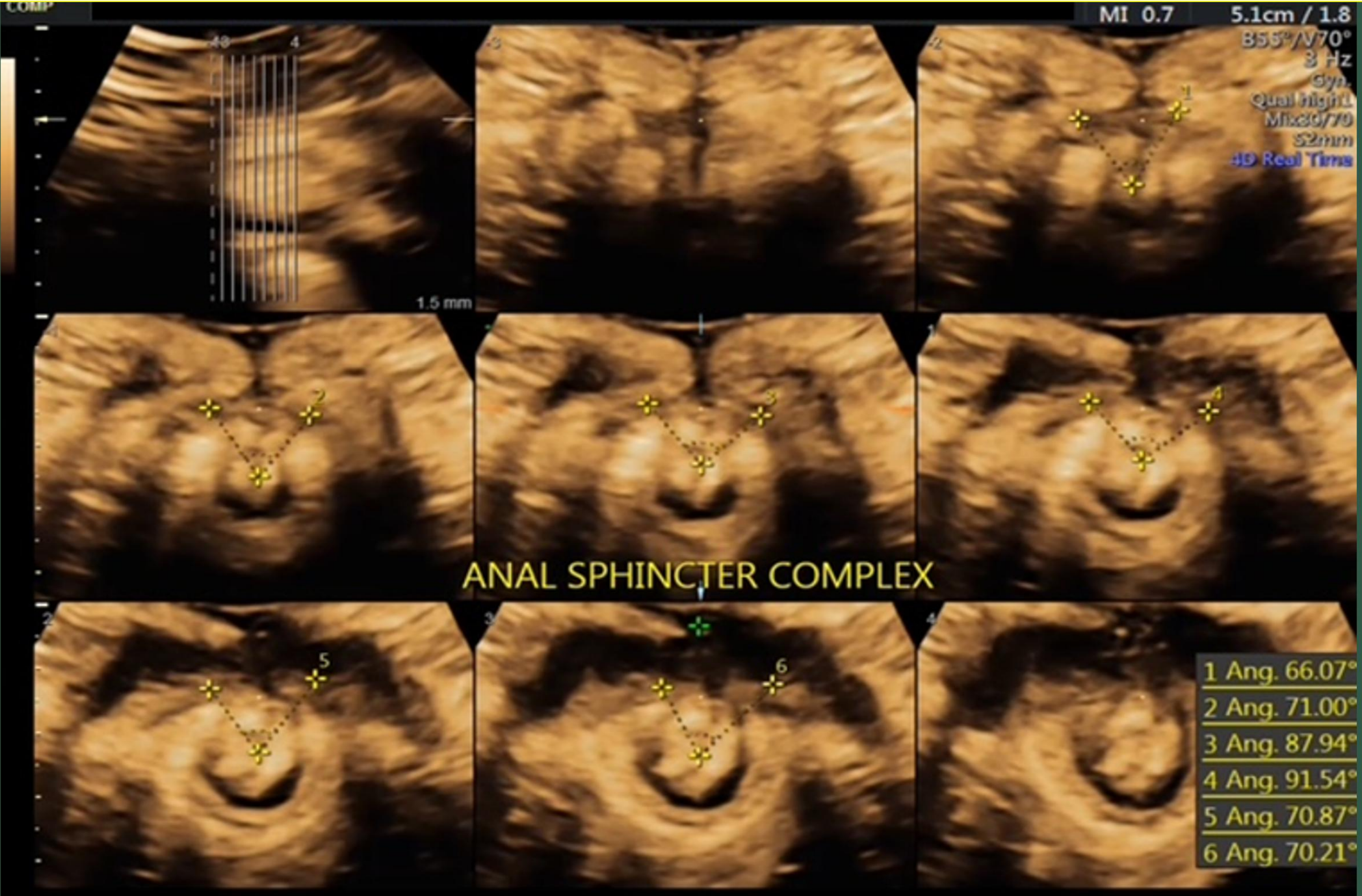


Fig.1. 4D TPUS with TUI of the patient with failed primary repair of a fourth-degree OASIS and with anal incontinence.. Imaging done after 10 weeks postpartum showed the 'half-moon' sign, EAS/ IAS defect >30° in all slices, and abnormal mucosal folds.

CONCLUSION

Most of the participants with findings of significant anal sphincter defects on 4D TPUS with TUI were asymptomatic. TPUS was able to correct overdiagnosis of OASIS and diagnose failed primary repair. This postpartum evaluation can help identify those women with OASIS at high risk for developing anal incontinence in the near future or later in life.