

# Insights into the Clinical Features, Diagnosis, Treatment, and Prognosis of Post-Surgical Abdominal Wall Endometriosis: A Retrospective Study [Letter]

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## Dear editor

We read with great interest the article by Zhao et al<sup>1</sup> recently published in the *International Journal of Women's Health*, which investigated the clinical features, diagnosis, treatment, and prognosis of post-surgical abdominal wall endometriosis (AWE) in 187 patients. The authors proposed a depth-based classification system dividing AWE into three types: type I (skin and subcutaneous fat layer), type II (fascia or muscle layer), and type III (peritoneal layer), and demonstrated that type III AWE is associated with larger lesion size, longer operative time, and higher rates of mesh and drainage placement. The study provides valuable clinical data from a relatively large single-center cohort with a median follow-up of 43 months. While we commend the authors for their contribution to this underexplored field, we would like to raise several points that may further enhance the interpretation and clinical applicability of their findings.

First, regarding the depth-based classification system, we wish to draw attention to a prior study by Wu et al<sup>2</sup> published in *Archives of Gynecology and Obstetrics* in 2023, which employed a virtually identical three-tier classification (type I: skin and subcutaneous tissue; type II: fascia and rectus abdominis; type III: peritoneum) in a larger cohort of 367 patients at Peking Union Medical College Hospital. Wu et al<sup>2</sup> similarly found that deeper invasion was associated with more severe clinical manifestations and higher surgical complexity, with a 5-year cumulative recurrence rate of 3.3%. However, this important antecedent study was not cited or discussed by Zhao et al<sup>1</sup>. It is noteworthy that both independent studies arrived at remarkably consistent conclusions, which strengthens the validity of this classification approach. Furthermore, Piriyeve et al<sup>3</sup> proposed an alternative classification using the fascia as a threshold to distinguish the degree of invasion in a multicenter study of 80 patients. A comparative discussion of these classification systems would have been valuable for the field.

Second, the reported 3-year cumulative recurrence rate of 6.2% and the absence of identifiable risk factors warrant careful interpretation. Kim et al<sup>4</sup> reported strikingly different results in their single-institution study, with cumulative recurrence rates of 23.8% at 24 months and 39.1% at 60 months. This discrepancy may be attributable to differences in follow-up duration, recurrence definitions, surgical techniques, or patient populations. Notably, positive surgical margins have been consistently identified as the strongest predictor of AWE recurrence across multiple studies.<sup>4,5</sup> While Zhao et al<sup>1</sup> described a resection margin of 0.5–1.0 cm, the pathological margin status (R0/R1) was not reported. Given that only 10 recurrence events were observed among 187 patients, the statistical power for identifying risk factors through Cox regression analysis was inherently limited. The inclusion of margin status as a variable in the recurrence analysis could have provided more clinically actionable insights.

Third, the discussion of emerging minimally invasive treatments, while acknowledged, could have been more comprehensively addressed. A recent systematic review by Razakamanantsoa et al<sup>6</sup> encompassing 2674 patients

demonstrated that percutaneous interventions, including high-intensity focused ultrasound (HIFU), cryoablation, and radiofrequency ablation, showed favorable safety profiles and clinical utility for AWE management. Surgical approaches achieved the highest local tumor control (median 100%) and pain relief rates (median 98.2%), while HIFU and cryoablation demonstrated local tumor control rates of 95.65% and 85.7%, respectively.<sup>6</sup> Moreover, Marcelin et al<sup>7</sup> reported long-term outcomes of percutaneous cryoablation in 40 patients with AWE, showing complete symptom relief in 80% at 3 months and a pain-free survival rate of 76.8% at 60 months, with no major adverse events. These findings suggest that percutaneous therapies may serve as viable alternatives for patients who are unwilling to undergo surgery, have medical contraindications, or present with recurrent AWE.

Fourth, we believe an important clinical consideration was omitted from the discussion: the risk of malignant transformation of AWE. Liu et al<sup>8</sup> conducted a systematic review identifying 46 cases of malignant transformation of AWE, with clear cell carcinoma and endometrioid adenocarcinoma being the most common histological types and overall poor prognosis. The estimated risk of malignant transformation is approximately 1% in premenopausal women and 1–2.5% in postmenopausal women.<sup>9</sup> Given the long-term nature of AWE follow-up, particularly in patients approaching menopause or receiving estrogen replacement therapy, clinicians should maintain a high index of suspicion for malignant transformation, especially when rapid growth, atypical imaging features, or unusual symptoms are observed.

Fifth, while the authors appropriately highlighted the strong association between cesarean section and AWE (98.9% of patients), we believe the discussion on prevention strategies deserves further emphasis. The global cesarean section rate is projected to increase from 21.1% to 28.5% by 2030,<sup>10</sup> with China's rate exceeding 40%.<sup>11</sup> Prevention at the source—reducing unnecessary cesarean deliveries—remains the most fundamental strategy. Additionally, standardized intraoperative preventive measures during cesarean sections, including thorough wound irrigation, changing gloves and instruments before closure, and using wound protectors, should be promoted as routine practice to mitigate the risk of iatrogenic endometrial implantation.<sup>5,12</sup>

In conclusion, the study by Zhao et al<sup>1</sup> contributes meaningfully to our understanding of AWE by providing a relatively large cohort with systematic depth-based classification. We hope that our observations regarding the prior classification literature, the importance of surgical margin reporting, emerging percutaneous therapies, malignant transformation risk, and prevention strategies will complement the authors' findings and stimulate further research in this important but underexplored field of gynecological surgery.

## Disclosure

The authors report no conflicts of interest in this communication.

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