OBJECTIVE: Endometriosis is a common gynaecological disease predominantly found in women in reproductive age and typically causes pelvic pain and infertility. Ovaries are one of the common sites that endometriosis affects but different types of endometriosis, such as deep infiltrating endometriosis (DIE), must be evaluated. The aim of the present study is to evaluate the application of three-dimensional transvaginal ultrasound (3D TUS) in symptomatic women without ovarian endometrioma.

PATIENTS: We retrospectively evaluated the relationship between a group of 41 women suffering from pelvic pain and the anatomical features of pelvic endometriosis. All women underwent both B-mode and 3D TUS in order to evaluate ovary and DIE. Patients were divided into three groups according to the type of endometriosis: 1) ovarian endometrioma; 2) DIE; 3) ovarian endometrioma associated with DIE lesion. All patients underwent surgery.

RESULTS: Of these 41 patients, deep endometriosis without ovarian lesions was found in 6 (14.6%) cases by using 3D TUS and confirmed by surgery. Thirteen patients (31.7%) had an ovarian endometrioma not associated with the DIE lesions. Of the remaining 22 patients (53.6%), a DIE lesion was associated with an ovarian endometrioma and diagnosed by 3D TUS.

CONCLUSION: Pain symptoms including dysmenorrhea, dyspareunia, chronic pelvic pain, and dyschezia are related to endometriotic implants at the posterior part of the pelvis or those with deep invasions. In symptomatic patients, deep infiltrating endometriosis should be investigated in order to find DIE lesions even if the absence of an ovarian endometrioma. Three-dimensional ultrasound should be considered as an important diagnostic technique in this group of women.