Transvaginal elastography is superior in differential diagnosis of uterine fibroids and adenomyosis

Yunyun Ren+, M.D., Ph.D., Ding Ding+, M.D., Ph.D., Xishi Liu, M.D., Ph.D., Sun-Wei Guo, Ph.D.
Shanghai OB/GYN Hospital, Fudan University, Shanghai 200011, China

【Abstract】

Objective: Elastosonography has been widely used in diagnosis of breast, liver, and thyroid gland disease for many years. The study about the use of elastography in the field of gynecology are scarce. To explore the value of transvaginal elastography in the differential diagnosis of normal, uterine fibroids and adenomyosis (ADM).

Methods: 152 ADM patients (60 hysterectomy), 89 uterine fibroid patients (18 hysterectomy, 71 hysteromyoma) and 137 control patients (21 hysterectomy because of cervical cancer) who visited OB & GYN hospital, Fudan University from August to December 2016 were recruited. The transvaginal elastography were arranged to these patients, and the basic medical information and pathology reports of part of these patients who underwent hysterectomy were reviewed as well.

Results: Overall, the TVEG provided a clear view of the typical elastic features and tissue stiffness in uterus and could distinguish normal myometrium, ADM (especially focal ADM) from fibroids. The ADM consistently had significantly higher elastic value than that of fibroids, which in turn was significantly higher than control myometrium (both p<0.01). In ADM, the elastic coefficients were positively correlated with the uterine volumes (r=0.338, p<0.01). While in fibroids, the elastic coefficients were not correlated with the size of the fibroids.

Conclusions: Transvaginal elastography is superior in the differential
diagnosis of normal, uterine fibroids and ADM patients and also benefit to guide of site of lesion removal as well.

**Key words:** adenomyosis / uterine fibroids/ transvaginal elastography / tissue fibrosis