

Mmulticenter study on constructing a clinical management process
of postpartum pelvic floor functional rehabilitation based on intelligent ultrasound
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Objectives

To explore the value of constructing a clinical management process of postpartum pelvic floor functional rehabilitation therapy based on intelligent pelvic floor ultrasound.

Methods

A multicenter, randomized controlled study design was adopted, 108 postpartum female pelvic floor dysfunction patients were prospectively included and randomly divided into study group and control group in a 1:1 ratio. The study group received individualized rehabilitation guidance based on pelvic floor ultrasound muscle strength classification (according to the anteroposterior diameter change rate $\Delta AP\%$ of the levator ani muscle hiatus). The control group was recommended for treatment by clinicians based on routine assessment. Both groups received one-month rehabilitation treatment. The intra-group and inter-group differences in pelvic floor ultrasound indicators before and after treatment were compared.

Conclusions

- The individualized rehabilitation program based on pelvic floor ultrasound muscle strength classification could precisely guide the selection of treatment methods and was significantly superior to the conventional approach in improving the urethral support and middle pelvic organ support function of postpartum women.
- The constructed clinical management process of "conventional ultrasound function classification and intelligent ultrasound morphological precision measurement" has significant promotion value and could effectively promote the postpartum pelvic floor rehabilitation towards precision and standardization.

Results

After 1 month of treatment, the lowest point of the bladder (BVa), the posterior vesicourethral angle (PUA), the lowest point of the cervix (CVa), the area of the levator ani muscle hiatus (LHA), and the urethral rotation angle under the maximum Valsalva maneuver in study group were all improved compared with those before treatment (all $P < 0.05$), while BVa, PUA and LHA under the maximum Valsalva maneuver in control group were improved compared with those before treatment (all $P < 0.05$). The bladder neck mobility (BND) and improvement of CVa under the maximum Valsalva maneuver in study group were better than those in control group (both $P < 0.05$), especially in terms of BND ($P < 0.01$).



Figure 1. Clinical management process of postpartum pelvic floor functional rehabilitation