

# Perbandingan Luas Area Hiatus Levator Ani dan Panjang Anteroposterior Hiatus Levator Ani antara Penderita Prolaps Organ Panggul (POP) Bergejala Benjolan dan Tidak Bergejala Benjolan = Comparison of Levator Hiatal Area and Anteroposterior Length between Pelvic Organ Prolapse (POP) Subject with and without Bulging Symptom

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## Abstrak

Latar belakang: Prolaps organ panggul (POP) didefinisikan sebagai turunnya visera pelvis (uterus, kandung kemih, uretra, dan rektum) dari posisi normal. Otot levator ani merupakan penopang panggul yang berperan penting dalam patogenesis POP. Studi sebelumnya menunjukkan terdapat perbedaan luas area hiatus dan panjang anteroposterior hiatus levator ani pada setiap derajat keparahan POP. Diagnosis POP dapat ditegakkan dengan POP-Q, namun pelaksanaannya masih terbatas sehingga dibutuhkan alat pemeriksaan lain untuk skrining pasien.

Metode: Penelitian ini adalah penelitian potong lintang dengan metode consecutive sampling. Peneliti mengidentifikasi subjek POP dengan dan tanpa keluhan benjolan. Subjek yang bersedia ikut serta dalam penelitian ini menjalani pemeriksaan POP-Q, panjang genital hiatus (Gh) dan perineal body (Pb), dan pemeriksaan USG translabial 3D/4D. Data dianalisis menggunakan SPSS Statistics 20 dengan uji T tidak berpasangan untuk membandingkan rerata parameter luas area hiatus dan panjang anteroposterior levator ani. Selanjutnya dilakukan analisa ROC untuk mendapatkan nilai titik potong dengan estimasi sensitifitas dan spesifisitas terbaik untuk membedakan prolaps bergejala dan tidak bergejala benjolan. Hasil: Sebanyak 109 subjek ikut serta dalam penelitian ini. Terdapat perbedaan bermakna luas hiatus ( $28,9 \pm 5,59$  vs  $19,6 \pm 4,63$ ,  $p < 0,05$  saat valsalva,  $15,2 \pm 4,08$  vs  $12,5 \pm 3,15$ ,  $p < 0,005$  saat kontraksi) dan panjang anteroposterior levator ani ( $8,6 \pm 1,06$  vs  $6,8 \pm 1,13$ ,  $p < 0,05$ ) antara kelompok dengan keluhan benjolan dan kelompok tanpa keluhan benjolan. Titik potong luas area hiatus dan panjang anteroposterior levator ani untuk membedakan subjek dengan keluhan benjolan dan tanpa keluhan benjolan adalah 25,1 cm<sup>2</sup> [sensitifitas 84,6%, spesifisitas 92,9%, AUC 0,925 (0,864-0,986)] dan 7,75 cm [sensitifitas 87,2%, spesifisitas 77,1%, AUC 0,859 (0,787-0,932)].

Kesimpulan: Terdapat perbedaan bermakna luas hiatus dan panjang anteroposterior levator ani antara kelompok dengan keluhan benjolan dan tanpa keluhan benjolan. Titik potong luas hiatus 25,1 cm<sup>2</sup> dan panjang anteroposterior 7,75 cm memiliki sensitifitas dan spesifisitas yang baik untuk membedakan kedua kelompok.

.....Introduction: Pelvic organ prolapse (POP) is defined as descent of the pelvic viscera (uterus, bladder, urethra, and rectum) from its normal position. Levator ani muscle is the largest component of pelvic floor that plays an important part in POP pathogenesis. Previous study showed that there was difference in levator hiatus area and anteroposterior length on every grade of POP. The diagnosis of POP can be established from POP-Q tool, however its use is still very limited within its subspecialist practice causing the need of a new screening tool.

Methods: This was a cross-sectional study with consecutive sampling method. We classified POP subject

with bulge symptom and without bulge symptom. Subjects that were willing to participate in this study underwent POP-Q examination and 3D/4D transperineal ultrasonography. Data were analyzed using SPSS Statistics 20 with student's t-test to compare levator hiatus area and anteroposterior length mean between 2 groups.

Results: A total of 109 subjects were included in this study. There was a significant difference in levator hiatus area ( $28.9 \pm 5.59 \text{ cm}^2$  vs  $19.6 \pm 4.63 \text{ cm}^2$ ,  $p < 0.05$  during valsalva maneuver,  $15.2 \pm 4.08 \text{ cm}^2$  vs  $12.5 \pm 3.15 \text{ cm}^2$ ,  $p < 0.05$  during contraction) and anteroposterior length ( $8.6 \pm 1.06 \text{ cm}$ , vs  $6.8 \pm 1.13 \text{ cm}$ ,  $p < 0.05$ ) between group with bulge symptom and without bulge symptom. Levator hiatus area and anteroposterior length cutoff to differentiate between subject with and without bulge symptoms was respectively  $25.1 \text{ cm}^2$  [sensitivity 84.6%, specificity 92.9%, AUC 0.925 (0.864-0.986)] and  $7.75 \text{ cm}$  [sensitivity 87.2%, specificity 77.1%, AUC 0.859 (0.787-0.932)].

Conclusion: There was a significant difference in levator hiatus area and anteroposterior length between group with and without bulge symptom. Levator hiatus area cut off at  $25.1 \text{ cm}^2$  anteroposterior length cut off at  $7.75 \text{ cm}$  showed good sensitivity and specificity to differentiate between 2 groups.