PERBEDAAN NILAI KEKAKUAN SERVIKS UTERUS MENGGUNAKAN SHEAR WAVE ELASTOGRAPHY TRANSABDOMEN PADA PASIEN KANKER SERVIKS BERDASARKAN STAGING INTERNATIONAL FEDERATION OF GYNECOLOGY AND OBSTETRICS (FIGO)

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ABSTRAK

Pendahuluan: Kanker serviks merupakan keganasan ginekologi dengan angka morbiditas dan mortalitas yang masih tinggi. Staging International Federation of Gynecology and Obstetrics (FIGO) berperan penting dalam menentukan tatalaksana dan prognosis. Shear wave elastography (SWE) memungkinkan penilaian kekakuan jaringan secara kuantitatif dan objektif, sehingga berpotensi menjadi modalitas tambahan dalam evaluasi kanker serviks.
Metode: Penelitian ini merupakan studi observasional analitik dengan desain potong lintang yang dilakukan di RSUP dr. Kariadi Semarang pada November 2024–Juli 2025. Sebanyak 34 pasien kanker serviks yang telah terkonfirmasi secara histopatologi dan terstaging FIGO menjalani pemeriksaan shear wave elastography transabdominal. Nilai kekakuan serviks uterus dianalisis berdasarkan staging FIGO dan jenis histopatologi menggunakan uji Mann–Whitney dan uji *independent t-test*.
Hasil: Rerata nilai kekakuan serviks uterus pada stadium FIGO II adalah 1,795 ± 0,125 m/s dengan median 1,763 m/s (1,62–2,14 m/s), sedangkan pada stadium FIGO III sebesar 2,534 ± 0,257 m/s dengan median 2,550 m/s (2,12–3,04 m/s). Terdapat perbedaan bermakna nilai kekakuan serviks uterus antara stadium FIGO II dan III (p = 0,000). Berdasarkan histopatologi, rerata nilai kekakuan pada squamous cell carcinoma adalah 2,306 ± 0,427 m/s dan pada non-squamous cell carcinoma 1,991 ± 0,307 m/s, tanpa perbedaan bermakna secara statistik (p = 0,098).
Simpulan: Nilai kekakuan serviks uterus yang diukur dengan shear wave elastography transabdominal meningkat secara signifikan pada stadium FIGO yang lebih lanjut.
Kata kunci: Kanker Serviks, Shear Wave Elastography, Kekakuan Serviks, Staging Figo, Ultrasonografi

DIFFERENCES IN CERVICAL UTERINE STIFFNESS MEASURED BY TRANSABDOMINAL SHEAR WAVE ELASTOGRAPHY IN PATIENTS WITH CERVICAL CANCER BASED ON INTERNATIONAL FEDERATION OF GYNECOLOGY AND OBSTETRICS (FIGO) STAGING

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ABSTRACT

Introduction: *Cervical cancer remains one of the leading gynecologic malignancies with substantial morbidity and mortality. The International Federation of Gynecology and Obstetrics (FIGO) staging system plays a crucial role in determining treatment strategies and prognosis. Shear wave elastography (SWE) enables quantitative and objective assessment of tissue stiffness and may serve as an adjunct imaging modality in cervical cancer evaluation.*
Method: *This observational analytic cross-sectional study was conducted at Dr. Kariadi General Hospital, Semarang, from November 2024 to July 2025. A total of 34 patients with histopathologically confirmed cervical cancer and established FIGO staging underwent transabdominal shear wave elastography. Cervical stiffness values were compared according to FIGO stage and histopathological subtype using the Mann–Whitney U test and independent t-test, as appropriate.*
Results: *The mean cervical stiffness value in FIGO stage II was 1.795 ± 0.125 m/s, with a median of 1.763 m/s (range: 1.62–2.14 m/s), whereas FIGO stage III demonstrated a significantly higher mean value of 2.534 ± 0.257 m/s, with a median of 2.550 m/s (range: 2.12–3.04 m/s). A statistically significant difference in cervical stiffness was observed between FIGO stage II and III ($p = 0.000$). Based on histopathology, the mean stiffness value for squamous cell carcinoma was 2.306 ± 0.427 m/s, compared with 1.991 ± 0.307 m/s for non-squamous cell carcinoma, with no statistically significant difference ($p = 0.098$)*
Conclusion: *Cervical tissue stiffness measured by transabdominal shear wave elastography increases significantly with advancing FIGO stage.*
Keywords: Cervical Cancer, Shear Wave Elastography, Cervical Stiffness, Figo Staging, Ultrasonography