

EP19.08 Feasibility and accuracy of automated dynamic tracking for measuring hiatal dimensions in the levator ani muscle

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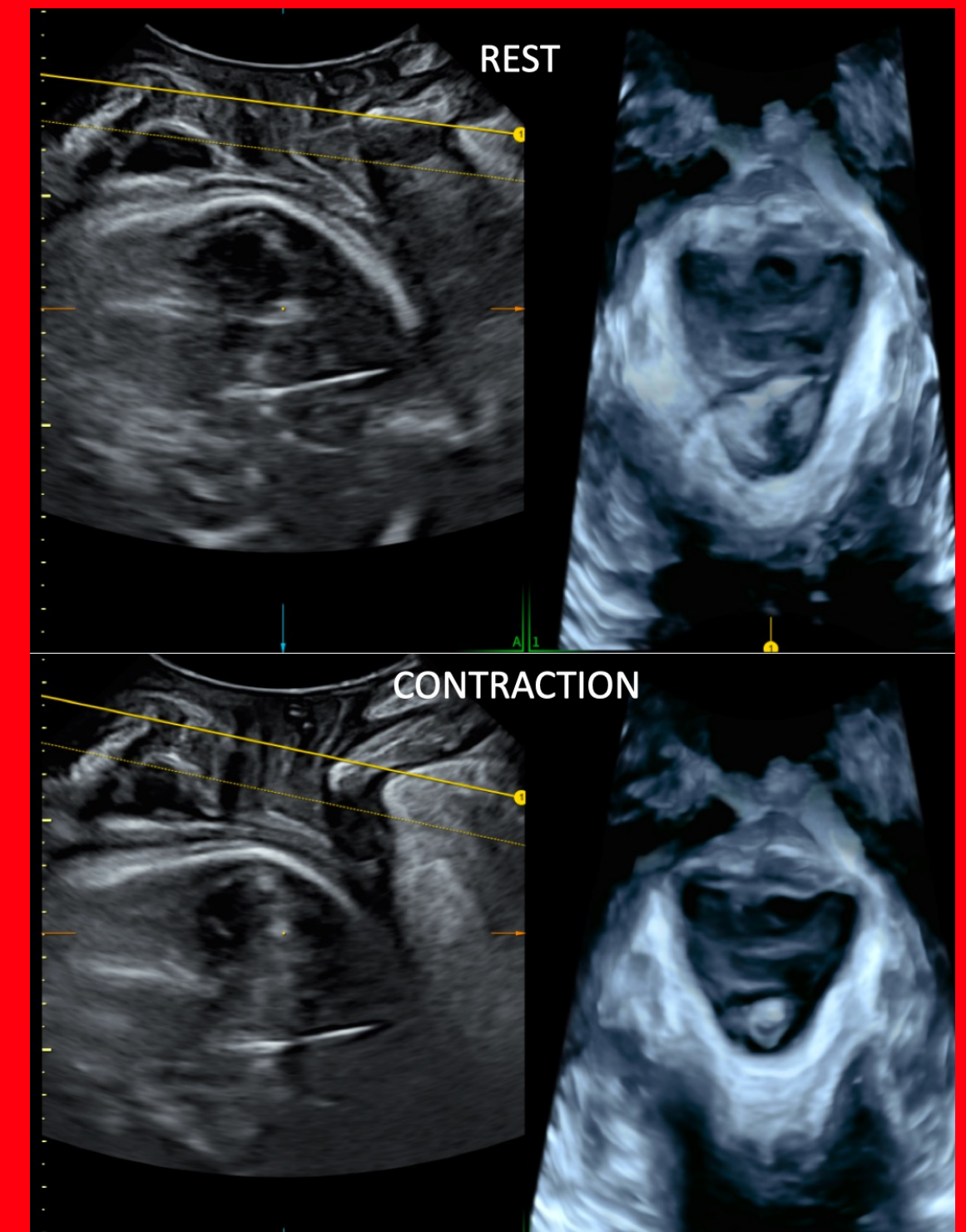
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Live Tracking-SonoPelvicFloor (GE Healthcare) software is designed for automated dynamic tracking and measurement of minimal levator ani muscle hiatal dimensions during pelvic floor muscle contraction (PFMC) and pushing. We aimed to assess its feasibility and accuracy on 4D transperineal volumes acquired at maximal PFMC and at pushing in 50 nulliparous women.

Methods: To Each dataset was analyzed manually and via automation to track and measure the levator hiatal area. An expert operator judged the acceptability of automated tracings. Intermethod agreement between automated and manual method was evaluated.

Results: The software measured the levator hiatal area in all cases under PFMC, but 8 (16%) automated tracings were deemed unacceptable and excluded. Under pushing, 2 cases (4%) lacked software recognition of the minimal hiatal dimensions plane. The remaining measurements were acceptable. Excellent intermethod agreement was found both under PFMC and pushing (ICC 0.938 and 0.964, respectively). Automated measurements were significantly larger than manual ones under PFMC ($P = 0.03$) but without clinical relevance; no systematic differences were found under pushing ($P = 0.22$).

Conclusions: Live Tracking-SonoPelvicFloor provides reliable automated assessment of levator ani hiatal dimensions, with excellent agreement to manual analysis, though limited manual oversight is still required



*Midsagittal 2D view and 3D reconstruction of pelvic hiatus. The OmniView-VCI line is placed along the plane of minimal pelvic hiatal dimensions, extending from the posterior margin of the symphysis pubis to the anterior border of the puborectalis muscle—defining the anorectal angle. At rest (top) and during contraction PFMC (bottom) using live C-plane tracking - **Live Tracking-SonoPelvicFloor** (GE Healthcare, Zipf, Australia).*