Learning curve and interobserver reproducibility evaluation of liver stiffness measurement by transient elastography:

Background/Aims: Fibroscan allows liver stiffness examination (LSE) that is well correlated with fibrosis stages. Our main objective was to evaluate LSE learning curve. Methods: LSE results of five novice observers with different medical status were compared with those of five expert observers (physicians with >100 examinations) in 250 patients with chronic liver disease. Each novice–expert pair had to blindly examine 50 consecutive patients divided into five consecutive subgroups of 10 patients. Results: In each observer group, novice–expert agreement [intraclass correlation coefficient (Ric)] for LSE results was excellent from the first to the last subgroup. Novice–expert agreement for LSE results varied with liver stiffness level: <9 kPa: Ric=0.49; ≥9 kPa: Ric=0.87. Relative difference (%) between novice and expert LSE results was independently associated with the number of valid LSE measurements, and stabilizes around 20–30% after the fourth valid measurement. In each observer group, novice–expert agreement (Ric) for LSE success rate progressively increased as a function of time. Conclusion: LSE requires no learning curve: a novice is able to obtain a reliable result after a single training session, whatever the professional status. However, success rate will progressively increase. An LSE with less than four valid measurements should not be considered as reliable.
Liens

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