

CONFERENCE ABSTRACT

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INTRA- AND INTEROBSERVER VARIABILITY OF ELASTPQ

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Key words: ElastPQ, point shear wave elastography, intraobserver variability, interobserver variability

OBJECTIVES AND BACKGROUND

To assess the variability of a new point shear wave elastography that uses ARFI technique – ElastPQ, as a non-invasive method for liver fibrosis assessment.

MATERIALS AND METHODS

The study included 88 consecutive subjects (43.2% women, 56.8% men, mean age 52.2 ± 14.7 years old, 20.5% with $BMI \geq 30 \text{ kg/m}^2$), with or without chronic viral hepatopathies and healthy volunteers. Two operators, with at least 2 years of experience in the field of liver elastography, performed 10 consecutive valid elastographic measurements in the liver parenchyma using ElastPQ (Philips, Affinity) technique (Fig1). Large vessels were avoided. Reliable liver stiffness measurements (LSM) were defined as the median value of 10 LSM expressed in kPa. The intra and interobserver variability of ElastPQ technology was analyzed with intraclass correlation (ICC) coefficient.

RESULTS

The overall intra- and interobserver agreement was excellent: ICC 0.97 vs. ICC 0.89. A strong correlation was obtained between measurements assessed by both operators ($r=0.84$, $p<0.0001$) and also between measurements assessed by a single operator 0.87 ($p<0.0001$). The ICCs were excellent in case of normal weight and obese patients, for both intra- and interobserver variability, (0.94 vs. 0.97 and 0.86 vs. 0.89, respectively).

CONCLUSIONS

ElastPQ is a highly reproducible method for assessing liver fibrosis.



Figure1: ElastPQ examination of the liver

REFERENCES

1. Ferraioli G, Tinelli C, Lissandrin R, Zicchetti M, Dal Bello B, Filice G, Filice C. Point shear wave elastography method for assessing liver stiffness. *World J Gastroenterol.* 2014;20:4787-96.
2. Ling W, Lu Q, Quan J, Ma L, Luo Y. Assessment of impact factors on shear wave based liver stiffness measurement. *Eur J Radiol.* 2013;82:335-41.