( ) R1 ( ) R2 ( ) R3 ( ) PG0 (X) PG1 ( ) Estagiário ( ) Tecnólogo ( )
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Service (sector) Glaucoma Nº CEP

B MODE 10MHZ AND 20MHZ ULTRASONOGRAPHY IN DETECTING EVIDENCED OPTICAL CUP DISK AND OPTIC NERVE PARAMETERS MEASURED BY OCT AND HRT ON ITS DIAGNOSTIC ABILITY

Cruz LMAB; Higa F; Pires L; Silva R; Quedas E; Paranhos A; Allemann N; Mello PAA. **Purpose**: To evaluate the ability of the B mode ultrasonography (US) by means of 10MHz and 20MHz transducers in detecting evidenced excavation in the optical disk and the influence of cup depth, disk area and cup area on its results**.**

Methods: 40 normal and 40 glaucomatous patients were evaluated by: fundus biomicroscopy (two observers), stereo photo (three observers), HRT, OCT and B mode US 10MHz and 20MHz transducers by one experienced examiner (masked for the other exams). The statistical analyses were performed with logistic regression and Kappa agreement test. Glaucoma suspect was defined as cup disk area ratio ≥ 0,7 (mean of three observers with stereo photos). For the logistic regression, detectable excavation was considered when positive by US for vertical (V) or horizontal (H) analysis and used as a binary dependent variable.

Results: The agreement between important clinical excavation in the optical disk (mean of three examiners higher or equal to 0,7) and evidenced excavation with 10Mhz and 20Mhz tranducers B mode ultra-sonography (V and H) shows Kappa of for10Mhz (V) 0,29 ; (horizontal) 0,37; 20Mhz (vertical) 0,38 (horizon) 0,39. Cup area was the most important factor for detection of the cup by US (for both frequency) and disk area (measured by OCT) for the 20Mhz works as a confounding factor .

Conclusions: The 20Mhz transducer (vertical) showed the best agreement for important clinical excavation and evidenced excavation with B mode US. Cup area had the highest odds ratio for both frequency.