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The benefit of USG in diagnosing radial scars in the context of differential diagnosis of breast lesions

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Abstract

A radial scar or complex sclerosing lesion is a benign hyperplastic lesion that ranks among the risk lesions, (histologically B3a, B3b) as it is not sparse associated with cell atoms or malignancy. In addition, it exhibits high morphological similarity to breast cancer in the imaging methods. USG diagnostics is a very useful way.

Goal of the presentation

In a retrospective study at the Department of Radiology St.Elisabeth Institut of Oncology and from Clinic of Radiology from Trenčín, he discovered the benefit and accuracy of sonography diagnosing compared to mammography and magnetic resonance and histology.

Material and Method

During the follow-up period, we performed more than 135,000 mammographic examinations, 280,000 sonographic examinations and more than 900 magnetic resonance examinations. Of this number we retrospectively evaluated the results of 386 patients with histologically diagnosed radial scar. Performed examination by age sonographically, mammographically, with magnetic resonance, but always verified histologically. We performed the core cutt biopsy under USG control, was realized by free hand methodes, with 14 G or 16 G needles, 22 mm sample, in number from 5 to 7 samples. All of them 386 patients were surgically treated. We compared retrospectivelly the results of sonographic conclusions, mamography, digital breast tomography and magenitc resonance conclusions with biopsies by core cutt biospy and final histology, We compared mainly the accuracy and correctness of the conclusion of sonography and histopathology.We evaluated the data using MC Nemar's test. We have tested the relationship with Spearman's correlation coefficient.

Background

Radar scar is portrayed by stellate setup of a fibroelastic center with entangled channels and lobules, and is likewise alluded to as unpredictable sclerosing injury (CSL).Spiral scar/CSL is determined at picture guided biopsy to have a rate running from 0.6 to 3.7%. Not with standing being unprecedented, spiral scars stay significant in tolerant administration on the grounds that their radiologic appearance covers that of intrusive carcinoma and their conclusion is trying for radiologists, with the possibility to be misconstrued by pathologists as second rate obtrusive ductal or rounded carcinoma. Spiral scars can be indistinct from obtrusive carcinoma on radiologic appearance alone, regularly introducing as a spiculated mass or compositional twisting. When determination has been made with center biopsy, the board is disputable as a result of the natural threatening capability of outspread scars and their conjunction with bosom malignancy and other high hazard injuries. Outspread scar is one of the proliferative classes that can coincide close by other proliferative high hazard injuries, including atypia, with each adding to the general overhaul rate to threat at extraction. As both radiology and pathology are defective for foreseeing related harm, the reasonability of careful extraction versus traditionalist administration stays easily proven wrong.

Radar scar/CSL is related with atypical proliferative sores and has been proposed as beginning phase improvement of intrusive carcinoma. The radiologically identified spiral scar related danger rate ran from 10.0 to 41.0% on extraction. In any case, late investigations with deliberately performed relationships among are radiological and pathology discoveries propose that move up to carcinoma on center biopsy happens in fewer than 2.0%. Moreover, the vast majority of the sores redesigned from spiral scar are ductal carcinoma in situ (DCIS) or second rate ductal or rounded sort. The present moment follow-up of outspread scars that were not extracted has indicated no overhauls.

Results

The results are in the 6 tables. The following resulted from the comparison: sonography was consistent with the correct assumption of radial lesion of benign characteristics in 251 cases, in 40 cases it was fundamentally different and the other 95 suspected. USG shows better results in women under the age of 40, women between age 40 and 50 are less reliable when comparing lesions by age. At the age of 50, digital mammography and digital breast tomography are more accurate than the ultrasound. The low correlation of correspondence is also in the field of architectural changes. More precisely, it is the elderly patient's mamograpfy a digital btreast tomography.An interesting comparison is special 3D mammography -digital tomosynthesis and magnetic resonance. 3D mammography –digital tomosynthesis is a very accurate method for diagnosing lesions with microcalcifications and for changes in architecture, but the images closely mimics the images of IDC, DCIS. Even magnetic resonance images are not unambiguous. In our group, only about 50% of examinations were accurate, the others were not correct, even after intravenous.

Conclusion

Sonography has a benefit examination women aged upto 40years of age and with dense breast tissue, women over 50years of age have a more accurate Xray MR is not very beneficial, has low specificity Sonography is important in the differential diagnosis of radial scare lesions Sonography is a method that is very affordable radiation free repeatable, not very costly under the control of sonography can be performed very perfectly and perform biopsie score cut biopsie.