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## The role of imaging techniques in oncology: use of the CT scanning in the further diagnosis of the secretory breast - a case report

## Ultrasonographical and biochemical characteristics of breast cysts and risk for developing breast cancer

Secretion from the breast is very common symptom which urges women to come to an examination of the breast in our dispensary either to early detect or to extinct the suspicion of a breast cancer. There are some standard procedures that are usually applied in such cases. Also, imaging techniques, from ultrasound, over X-rays to the CT and NMR are indispensable in complete diagnostic in oncology. In this particular case, a female patient, twenty-four years old, a mother of two children, 3 and 6 years old, checks in for the first time in our dispensary because of the spontaneous, serosal secretion from the breasts, that started one year ago. First we did the ultrasound of the breast. Diagnosis was: "Dysplastic structure of the breasts without any focal lesion". Cytology diagnosis of the secretion was: "Galactorrhoea". Five times she gave the secretion for an eventual isolation of the bacterial culture, but all where sterile. We measured the level of the Prolactinemia which was extremely high: 3424,0 (normally from 72 to 480). That was an indication to do the X ray of the sella turcica: "Sella was of normal size and shape, but the obliqueness of the both clinoid processes gives the impression of the span". It urged us to do the CT scan of the sella turcica: "Sella was of the normal bone structure, but intrasellar is detectable nonhomogeneous, soft tissue-like structure, whose diameter was 10x8 mm. We presented the patient to Breast consultation in Niš, which gave the following decision: "Patient should start with p.o. taking of Bromocriptine according to a scheme with three- month period of cheking up. We also presented the patient to CNS consultation in Niš, which gave the same decision. After one month we repeated the level of blood Prolactine which decreased to 2913,0. Now we carefully follow up on that patient waiting for the result of the therapy.

**Key words:** Galactorrhoea; Prolactinemia; Imaging

Ultrasonographical appearance of breast cysts is well defined with smooth boundaries and normally no echo content. The echoes seen in cysts are often due to artifacts from multiple reflections of anterior wall. Sound through transmission is high and this results in posterior enhancement, which is frequently accompanied with lateral shadowing. Echogenicity within a cyst can cause confusion, sometimes leading to diagnosis of fibroadenoma or breast carcinoma. In our study we have ultrasonographically evaluated 520 women with some breast changes. The most frequent lesion was fibrocystic dysplasia 42% (218), fibroadenoma in 13% (68), breast carcinoma 1 % (57) and normal features of breast tissue in 34% (177). All complex cysts (62) were aspirated with fine needle and biochemically evaluated. The concentration of potassium was higher in apocrine cysts, than in cysts with flattened epithelium ( $t=6,54$   $p<0,01$ ). Concentration of sodium was higher in flattened cysts ( $t=9,755$   $p<0,01$ ). Single cysts were more often flattened. Multiple cysts in 88 % were of the same kind. Apocrine cysts recur 5 times more often, and risk for developing breast carcinoma is more than RR 2. US and biochemical analysis of cysts, give a lot of information about natural development of different cystic changes within breast, which are frequent in population.

**Key words:** Cysts; Breast; Ultrasound; Electrolytes