

ONE DAY DIAGNOSIS

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Summary

At the University Hospital for Tumors, University Hospital Center Sestre milosrdnice about 700 breast cancers and about 150 benign changes of the breast are operated annually. After mammography and ultrasound, basic distinction between benign and malignant is achieved by fine needle (FNAC aspiration) under visual control of various radiological methods, mainly ultrasound (US).

Importance of early cancer diagnosis and planned treatment action achieve the best outcomes. In order to bridge the time gap between different diagnostics and reduce psychological stress, we introduced the concept of one-day clinic into our outpatient practice. Service comprises triple diagnostic test when a lesion is suspected along with treatment plan according to the diagnosis in 8 hour time frame.

The service has been operating for the past two years and has had positive response from both staff and patients.

KEY WORDS: *breast clinic, breast disease, mammogram, breast ultrasound, cytology, triple assessment, one-stop diagnosis*

JEDNODNEVNA DIJAGNOSTIKA

Sažetak

U Klinici za tumore Kliničkog bolničkog centra Sestre milosrdnice, godišnje se operira oko 700 karcinoma dojke i oko 150 benignih lezija dojke. Nakon mamografije i ultrazvuka, razlikovanje malignih od benignih tumora se postiže punkcijom pod kontrolom različitih radioloških metoda, prvenstveno ultrazvuka.

Važnost ranog otkrivanja raka i planiranje liječenja daju najbolje rezultate. Kako bi se premostili vremenski periodi između različitih dijagnostičkih postupaka i reducirao stres koji nastaje iščekivanjem rezultata, uveli smo koncept jednodnevne dijagnostike. Usluga se sastoji od trojnog dijagnostičkog testa u slučaju sumnje na tumor i plana liječenja u vremenskom okviru od 8 sati.

Jednodnevna dijagnostika djeluje zadnje dvije godine i izazvala je pozitivne reakcije kod pacijenata i kod osoblja.

KLJUČNE RIJEČI: *klinika za bolesti dojke, bolesti dojke, mamografija, ultrazvuk dojke, citologija, trodijelni pristup, jednodnevna dijagnoza*

INTRODUCTION

At the University Hospital for Tumors, University Hospital Center Sestre milosrdnice about

700 breast cancers and about 150 benign breast lesions are operated annually. Radiology performs 12 000 breast ultrasound and 12 000 mammographies, as well as about 3000 fine needle aspirations

(FNA) under visual control of various radiological methods, mainly ultrasound (US). Based on the experience and organisation of the leading oncology centers, such as Institute Gustave Roussy, Cambridge University Hospital, Oslo University Hospital and Cleveland Clinic, we recognized the need for individualized patient approach and rapid diagnostics which would solve the benign/malignant breast lesion dilemma quickly and accurately (1,4).

In past two decades the number of patients treated who came from other cities and parts of Croatia increased. With their number issues of transport to various diagnostics, getting the findings and eventually getting the specialist counseling increased the cost of such actions, both in their time and effectively in resources. Since infrastructure to implement true multidisciplinary approach into existing breast cancer diagnosis and treatment algorithm already existed at University Hospital for Tumors, we merged three protocol into one creating a patient oriented one-day diagnosis.

Patients who are eligible for one-day diagnosis service are the ones who have had suspicious MRI or US finding previously, or have noticed a palpable change in their breast by themselves, and have been instructed to investigate it further by their general practitioner.

One-day diagnosis of breast lesion implies that triple test (clinical examination, mammography/ultrasound and FNA/core biopsy) and the final specialist consultation is performed with from 7,30am. to 3pm (2,3). Due to large turnover, about 3000 aspiration cytologies annually, and a good correlation with later pathological report, we rely on cytology report as a decisive factor for further treatment in one day diagnosis. FNA is a minimally invasive method which provides analysis immediately after the procedure and at the place where it was performed (on-site, one-stop diagnosis). The diagnostic procedure and its related risks are first discussed with patients, who are informed that 1 or 2 supplementary needle passes might be needed. An informed consent is acquired. Cytological report is issued within 30 minutes. In case of unclear cytological findings, additional procedures may include core biopsy or additional aspirations providing material for immunocytochemistry (ICC) smears.

Depending on the cytology or core biopsy based diagnosis and the clinical staging after the triple test will be referred to a surgeon, medical oncologist, radiation oncologist or multidisciplinary team meeting for the plan of their treatment. Currently, this service is available one day a week. On that day the entire team of experts is dedicated exclusively to one-day diagnosis. The team consists minimally of radiologists and a cytologist while surgeons, oncologists and radiotherapists are available on call.

Patients in process of one-day diagnosis can use specially arranged area which is furnished with entertainment materials to make the unavoidable waiting period as comfortable as possible. Moreover, psychologist and/or psychiatrist is available in order to provide professional attention to the psychological needs of patients (1,2).

Since the service opened in 2013 we performed 639 fine needle aspirations on patients with one or more lesions, from which 237 breast cancers (37%) were confirmed. All patients started adequate therapeutic protocols in the shortest possible time. When correlating the cytology with the pathology with only two false positives and none false negative diagnosis were found. In the case of false positive cytological diagnosis was mucinous carcinoma and epithelial atypia while pathohistological diagnosis was fibroadenoma with prominent mucinous component and adenosis. Fine needle aspiration cytology (FNAC) gave the predictive value of 99,15% with the sensitivity of 100% and the specificity of 99.5%.

Fortunately, most patients who come to one day diagnosis belong to other 63% and are discharged usually just with a recommendation for a preventive check up scheme and a great relief.

CONCLUSION

We believe that the way of managing breast cancer diagnostics has, so far, greatly contributed to earlier discovery of lesions with the rational consumption of resources and equipment, as well as to the satisfaction and improved well-being of our patients. Although it is difficult to accurately encompass and quantify both the positive psychosocial and the economic impact of this practice, the psychological relief one-day diagnostic service brings to our patients seems to be priceless.

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