Multidisciplinary Cancer Investigation **Original Article**

Supplement Issue1: International Tehran Breast Cancer Congress (TBCC9)

Comparing Ultrasound Features of Invasive Ductal Carcinoma Regarding Patient Ages: ≤ 40 Years Old and Above it

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DOI: 10.21859/mci-supp-118

Keywords:
Breast Cancer
Ultrasonography
Young Women
Invasive Ductal Carcinoma

Abstract

Introduction: Approximately 7% of breast cancer are detected before age of 40 years. Nowadays sonography is method of choice in symptomatic young patients. In different parts of the world incidence of young breast cancer is increasing. Comparing Ultrasound characteristics of both groups (under 40 and 0ver 40) based on BIRADS descriptors fifth edition including margin, shape, size, orientation, posterior feature, internal echo and peripheral halo would help us to recognize breast cancer better in ultrasound.

Materials and Methods: In a retrospective study we reviewed the ultrasound features of 80 women with histologically diagnosed breast cancer (invasive ductal carcinoma); 38 of them were under 40 and others (38 cases) were above 40; then data analyzed and US features of both groups compared with each other.

Results: The mean age of patients was 43.89 years (range 26-78y). In overall the most frequent features were indistinct margin (45%), irregular shape (63.5%), posterior shadowing (38.8%), thin halo (76%). Heterogeneous internal echo(56.3%) and parallel orientation(76.3%). Mean size was 15.69 mm (5-36 mm). Comparing two groups mean size of mass was 18.3 mm in the younger group and 13.2 mm in the group older than 40 with significant statistical difference (p= 001). There is no significant differences between the age groups considering to margin, shape, halo, posterior feature, halo and orientation. Additionally Heterogeneous masses were more common in young women (under 40); this difference was not significant (P = 0.07).

Conclusions: Similar to other studies breast cancer was diagnosed in larger size in younger patients may be due to delay to diagnosis, also because of rapid growth of tumor, lack of routine screening method and dense fibroglandular tissue in women under 40 years old, breast cancer diagnosis is challenging. Despite low prevalence of breast cancer at age ≤ 40 years we should consider the probability of malignancy in this group.