

Risk of invasive carcinoma among obese woman with Lobular Carcinoma in Situ.

Introduction: Lobular carcinoma in situ (LCIS) is a high risk factor for invasive breast cancer (IBC) with rates of IBC development of about 1-2%/year. Obesity is a co- factor for IBC with direct correlation between body mass index and risk of cancer.

Objective: To investigate the contribution of obesity to the risk of IBC in patients with LCIS.

Methods: We conducted a retrospective study with data retrieved from electronic medical records including patients diagnosed with LCIS between 1990 and 2010. We excluded patient with IBC (previous or synchronous), ductal carcinoma in situ (DCIS), those that underwent bilateral prophylactic mastectomy (BPM) and those free of disease progression but with less than 5y follow-up. Body mass index (weight/height²) was categorized as recommended by the World Health Organization. The frequency of patients developing IBC or DCIS after pure LCIS was calculated for the whole population and across BMI categories.

Results: 384 patients were diagnosed with LCIS within 20 years. Pure LCIS (no IBC, no DCIS) represented 38.54% (n=148). Twenty-seven (18,2%) underwent BPM, 84 (56,7%) received hormoneprophylaxy and 37 (25%) were followed without any therapy. At a median follow-up of 92 months (30-305 months), 18 (12.2%) patients developed cancer after between 47 and 205 months (median 105 months), all but 3 received hormoneprophylaxy. Cancer were of CLI histology (n=10; 55%), No special type histology (n=6; 33%) and DCIS (11%) and Ipsilateral in 13 (72%), contralateral in 4 (22%) and bilateral in 1 (6%) of the cases. BMI data was available in 86 patients [3 (3.5%) underweight, 39(45.3%) normal weight, 31(36.0%) overweight, 10 (11.6%) obesity class I and 3 (3.5%) obesity class II. Cancer was observed in 1, 5 , 4, 3 and 1 patients respectively. As a group, overweight/obese woman did not developed cancer at higher rates than normal/underweight patients. (p=0.24)

Conclusion: Obese woman did not showed increased risk to develop breast cancer among woman with LCIS. Frequencies of breast cancer development in woman with LCIS after up to 25 years of follow-up were similar to recent published data from King et AL, despite a higher frequency of bilateral mastectomy and hormoneprophylaxy use in the brazilian cohort.