

Chapter 4

BREAST DISEASES DURING LACTATION: CLINICAL AND RADIOLOGICAL FINDINGS

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The breasts undergo extensive changes during pregnancy and also lactation. Physiological and also pathological changes occur in the breast in the lactation period due to hormonal alterations. Even though the disorders of breasts in lactating women are usually the same as with nonpregnant women, some of the breast disorders such as galactocele and lactating adenoma are seen only in the lactation period. It is important to know the changes of breasts during lactation to understand the pathogenesis of diseases and clinical findings and also to evaluate radiological features of lesions. Radiological evaluation and physical examination of breasts in the period of lactation in which influenced by hormones is challenging (Vashi & et al., 2013; Yu & et al., 2013).

Lactogenesis is described as the onset of milk secretion. It is divided into two stages. Stage 1 occurs during pregnancy, and stage 2 starts with parturition. Despite estrogen and progesterone has an integral role in the preparation of the breast for lactation, both estrogen and progesterone inhibit milk production in pregnancy. In stage 1, during pregnancy, local effects of estrogen and progesterone in the breast antagonize the synthesis of prolactin which prevents milk secretion during pregnancy. In stage 2, with the sudden withdrawal of hormones after delivery, and local breast stimulation by suckling, the release of prolactin and oxytocin cause milk secretion (Neville 2001; Neville, Morton & Umemura, 2001).

Histopathological changes during lactation are growth and marked distention of lobules, enlargement of hyperchromatic nuclei with enlarged cells of vacuolated cytoplasm. In also myoepithelial cells, changes such as flattening and attenuating are seen in the lactation period. Distention of lobular glands and accumulation of secretion in ducts is seen in the secretory phase. Glandular proliferation, ductal distention, and stromal involution are seen in this period. The main changes in

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