



Contralateral Breast Tissue Thickness Changes Post Radiotherapy of Breast Cancer Patients

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SUMMARY. Investigation of early changes that may occur in the tissue thickness of the contralateral breast shortly after the course of radiotherapy. Fifteen females have been involved in this study. Their mean age (51.6 ± 7.4) years. They were diagnosed as having unilateral breast cancer and underwent unilateral breast lumpectomy or mastectomy. A radiation dose of 50 Gy or 40.05 Gy was used for the breast radiotherapy. The radiotherapy of the target breast and contralateral breast was performed by the three-dimension conformal radiotherapy (3DCRT) technique by using Elekta made in Sweden. The multileaf collimator (MLCs) of linac is 80 pairs. Treatment planning system (TPS). The contralateral breast tissue thickness was measured at four selected location, 3-4 cm away from the nipple region of the contralateral breast to evaluate the tissue thickness changes before radiotherapy and three months post radiotherapy. The tissue thickness measurement was done by using Ultrasound technique. A significant decrease of the contralateral breast tissue thickness three months post radiotherapy at the superior, medial, and lateral points ($P= 0.002, 0.016, \text{ and } 0.019$) respectively. The breast tissue thickness of the four selected points didn't show a significant correlation with the maximum radiation dose received by the contralateral breast ($P= 0.57, 0.88, 0.57$ respectively). Early detection of contralateral breast tissue changes after a completed course of radiotherapy for the breast cancer women.

RESUMEN. Investigación de los cambios tempranos que pueden ocurrir en el grosor del tejido de la mama contralateral poco después del curso de la radioterapia. Quince mujeres han participado en este estudio. Su edad media ($51,6 \pm 7,4$) años. Se les diagnosticó cáncer de mama unilateral y se sometieron a lumpectomía o mastectomía unilateral de mama. Se utilizó una dosis de radiación de 50 Gy o 40,05 Gy para la radioterapia de mama. La radioterapia de la mama diana y la mama contralateral se realizó mediante la técnica de radioterapia conformada tridimensional (3DCRT) utilizando Elekta fabricado en Suecia. El colimador de hojas múltiples (MLC) del linac es de 80 pares. Sistema de planificación del tratamiento (TPS). El grosor del tejido mamario contralateral se midió en cuatro ubicaciones seleccionadas, a 3-4 cm de la región del pezón de la mama contralateral para evaluar los cambios en el grosor del tejido antes de la radioterapia y tres meses después de la radioterapia. La medición del espesor del tejido se realizó mediante la técnica de Ultrasonido. Una disminución significativa del grosor del tejido mamario contralateral tres meses después de la radioterapia en los puntos superior, medial y lateral ($P= 0,002, 0,016 \text{ y } 0,019$) respectivamente. El grosor del tejido mamario de los cuatro puntos seleccionados no mostró una correlación significativa con la dosis máxima de radiación recibida por la mama contralateral ($P= 0,57, 0,88, 0,57$ respectivamente). Detección temprana de cambios en el tejido mamario contralateral después de un curso completo de radioterapia para mujeres con cáncer de mama.

KEY WORDS: breast cancer, contralateral breast, tissue thickness.

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