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방사선 치료 후 발생한 모세혈관 확장증으로 인한 유방 피부 피판 손상 및 보형물 기반 유방 재건 실패: 증례 보고

Post-radiotherapy Telangiectasia Causing Mastectomy Skin Flap Compromise and Failure of Implant-Based Breast Reconstruction



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Purpose: Postmastectomy radiotherapy significantly increases the risk of complications in implant-based breast reconstruction. Among radiation-related changes, progressive telangiectasia may indicate underlying microvascular injury and impaired perfusion of the mastectomy skin flap. We report a case of implant reconstruction failure associated with radiotherapy-induced telangiectasia in the absence of clear infection or seroma.

Methods: A case of progressive skin flap compromise following implant-based breast reconstruction after radiotherapy was retrospectively reviewed.

Results: A 42-year-old woman with left breast cancer underwent nipple-sparing mastectomy followed by prepectoral tissue expander insertion. After adjuvant radiotherapy to the chest wall and regional lymphatics (total dose 4005 cGy), implant-based reconstruction with a silicone implant and acellular dermal matrix was performed. Several months later, progressive erythema, skin thinning, and prominent telangiectasia developed over the mastectomy skin flap. Laboratory findings and clinical course did not clearly support overt infection or significant seroma formation. Despite conservative management and surgical intervention including partial capsulectomy and implant exchange, the skin progressively deteriorated with violaceous discoloration and epidermal erosion, suggesting radiation-induced microvascular injury and compromised skin perfusion. Ultimately, the implant was removed and the reconstruction was converted to an autologous deep inferior epigastric artery perforator (DIEP) flap. Following the conversion to

autologous reconstruction, the skin condition improved markedly.

Conclusion: Post-radiotherapy telangiectasia may represent clinically significant microvascular injury that compromises mastectomy skin flap viability and jeopardizes implant-based reconstruction.

Recognition of these vascular changes is important when determining reconstructive strategies in irradiated patients. Autologous tissue transfer may also help improve radiation-related skin changes and associated telangiectatic symptoms.

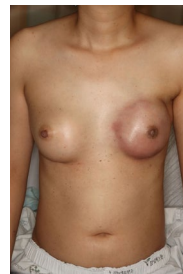


Fig. 1. Early postoperative erythematous change of the irradiated mastectomy skin flap.

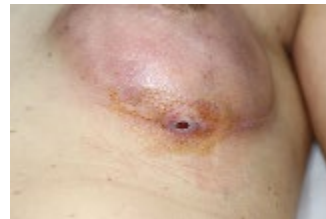


Fig. 2. Thinning and compromised condition of the mastectomy skin flap overlying the implant during



Fig. 3. Progressive violaceous discoloration reflecting radiation-induced microvascular injury.



Fig. 4. Improved skin condition on postoperative day 15 after conversion to DIEP flap reconstruction.