

The lymphatic anatomy of the superficial tissues of the head and neck: Anatomical study and clinical implications.

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Background: There is an increasing clinical need for accurate evaluation of the lymphatic anatomy of the head and neck.

Methods: Forty-nine combination specimens of tissues of the head and neck from 20 unembalmed human cadavers were studied. 6% hydrogen peroxide was used to find the vessels. They were injected with ink and/or radio-opaque mixture, dissected, photographed and radiographed. Final results were transferred to the computer for analysis.

Results: Different sized lymphatic valves and valve intervals were found in the precollecting and collecting lymph vessels, the lymphatic trunks and ducts. Lymphatic ampullae and diverticula of various sizes and shapes were seen in precollecting and collecting lymph vessels. Diverse initial lymph vessels arose from the dermis, the galea and the mucosal membrane. The morphology of the direct and indirect precollecting and collecting lymph vessels, lymphatic trunks and ducts were seen photographed and radiographed. Lymph collecting vessels were found in the scalp, the face and the cervical region, dense in the scalp and lateral neck area, but sparse in the facial, anterior and posterior neck. Two layers of lymphatic vessels were found in the anterior superficial neck tissue coursing in different directions.

Conclusion: This study will provide an actual anatomical superficial lymphatic image of the head and neck and help surgeons to manage the treatment of the trauma, infection, lymphoedema and cancer.