Clinical Relevance of Quantifying Pelvic Lymph Nodes for Predicting and Treating Genital Lymphedema

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INTRODUCTION

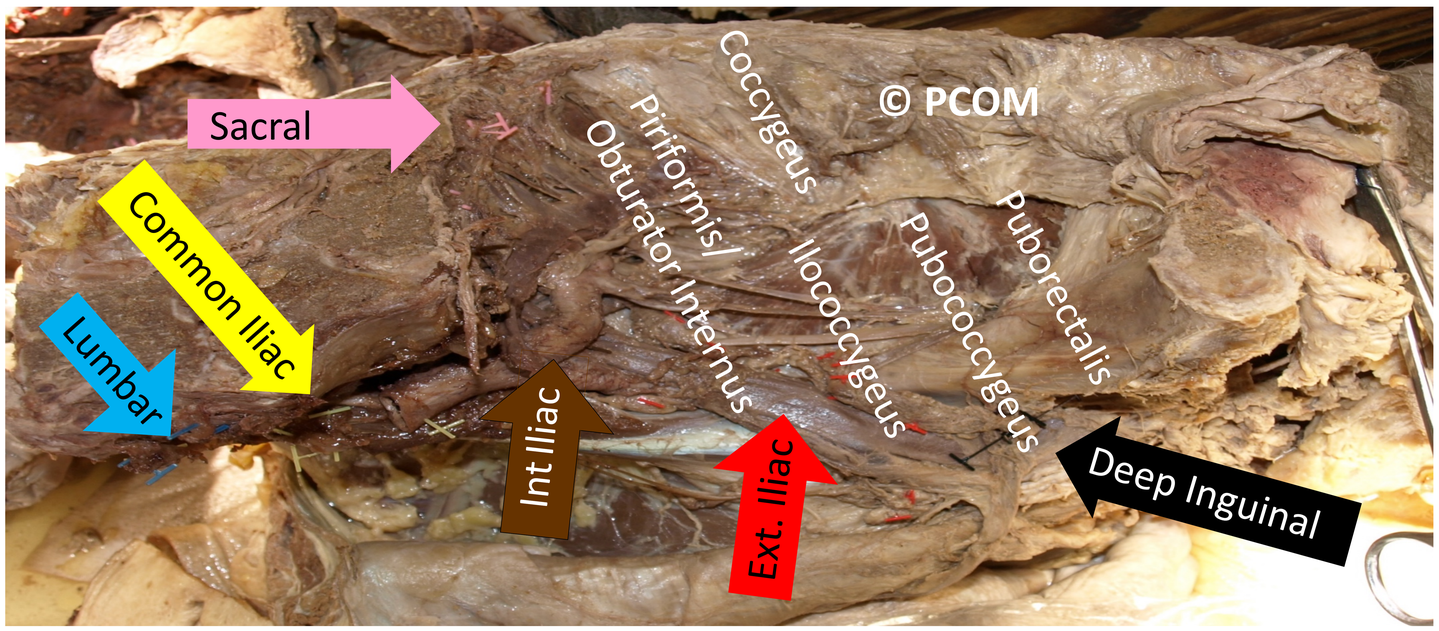
Anatomical research on the pelvic lymph nodes (LN) is inadequate. According to previous research there are between 41-154 LNs in the pelvic region (Inguinals-Lumbar) based on reported mean values across several studies.[1-4] This range should be considered too large for a surgeon to decide how many LN to remove for diagnosing cancer without causing unnecessary harm or for a lymphedema therapist to explain expectations of involvement or improvement to a person with lymphedema. A more precise understanding of numbers and LN removed can help guide a therapist's treatment with genital lymphedema. Muscles can assist in pumping fluid from an involved region to an uninvolved region when LN are removed. The pelvic floor muscles are adjacent to 4 of pelvic LN groups (Iliacs and Sacral).[3]

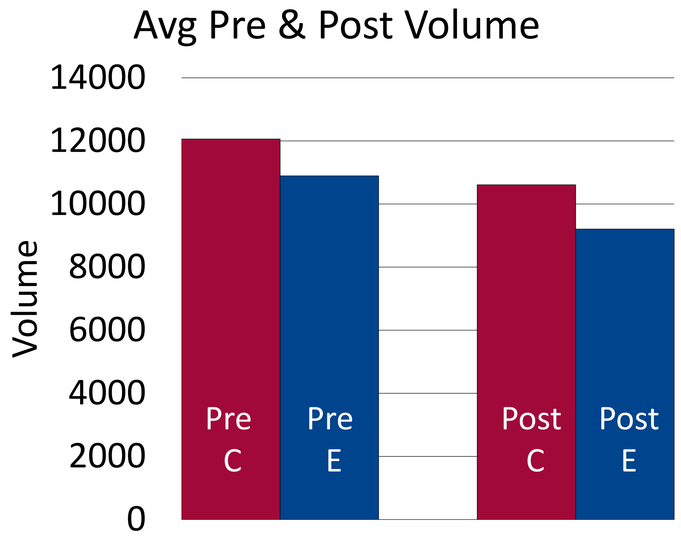
RESOURCES

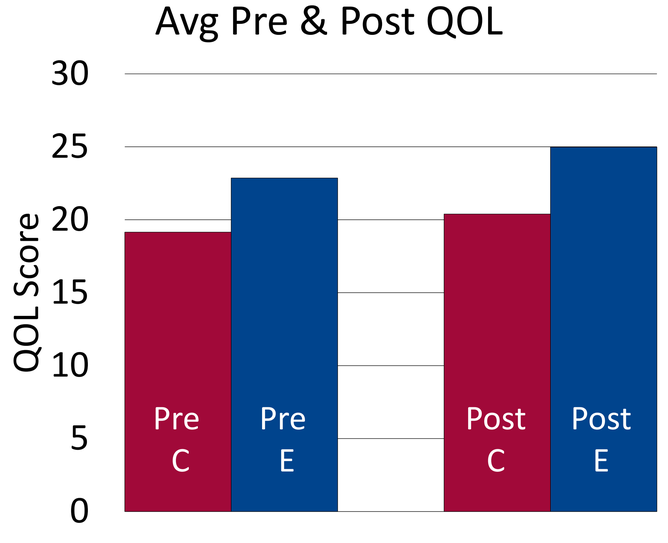
A study on 43 cadavers was completed to quantify the number of pelvic LN based on anatomical landmarks. Quantitative and qualitative research was conducted to assess volumetric reductions and quality of life (QOL) improvements with targeting portions of the pelvic LN via pelvic floor muscle contractions in treatment of 10 females with lower extremity lymphedema with and without genital involvement.

DESCRIPTION

The cadaveric study found a true mean range [CI=95] of 54-77 LN in the pelvic region. The treatment study found significant reduction [$p=0.006$, $\alpha=0.05$] in volume and significant improvement [$p=0.035$, $\alpha=0.05$] in overall QOL.







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SIGNIFICANCE

Reducing the mean range of LN in the pelvic region should positively impact the medical community and patients. This is particularly true for lymphedema therapists treating those post cancer treatments in the pelvic region. Improved expectations for outcomes can be provided if the therapists know the number and location of the LN removed during diagnosis and/or treatment by the physician. Therapists can incorporate muscles near the removed LN in treatment to help reduce edema and improve QOL for cancer survivors.

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