

## Short commentary on Lymphedema after Treatment for Endometrial Cancer

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Lymphedema development after cancer treatment in women with endometrial cancer is a poorly explored complication and there is a substantial gap in the knowledge of this troublesome treatment-related adverse effect. Endometrial cancer is the most common gynecological cancer. The majority of the women diagnosed with endometrial cancer will be long-term survivors. The primary treatment of endometrial cancer most often comprises hysterectomy and bilateral salpingo-oophorectomy. Pelvic and para-aortic lymphadenectomy is recommended in prognostic high-risk groups of endometrial cancer. Lymphedema development is associated with lymphadenectomy.

This short commentary presents a summary of the recently published systematic review article entitled Lymphedema after Treatment for Endometrial Cancer—a review of prevalence and risk factors [1]. The review comprised the sub-items: Prevalence of lower limb lymphedema; Methods for determining the lower limb lymphedema diagnosis; Risk factors for lower limb lymphedema; Follow-up time and onset of symptoms of lower limb lymphedema; and -Impact on quality of life after surgical treatment of endometrial cancer including lymphadenectomy.

The review [1] is a descriptive meta-analysis of literature published on lymphedema development after surgery of endometrial cancer. The review reveals several essential weaknesses in the knowledge of lymphedema after treatment of endometrial cancer. So far, no randomized controlled trials with lymphedema as primary endpoint after treatment of endometrial cancer have been published. The reported prevalence of lymphedema after endometrial cancer treatment are mainly based on retrospective or cross-sectional studies. The reported prevalence vary between zero [2] and 50% [3]. Many of the retrospective studies do not include objective measurements of lymphedema, but report patient complain over swelling legs as lymphedema. Thus, the true prevalence of lower limb lymphedema after treatment of endometrial cancer remains to be established. Several methods to evaluate and categorize lymphedema have been presented but these are not consistently used in studies of endometrial cancer treatment. In addition, in most studies the base line measurement of lymphedema is lacking. The methods used in the studies include subjective scoring systems based on questionnaires, various clinical rating systems, directly or indirectly objective measurement of limb volume, bioimpedance measurements and various imaging techniques such as CT-scan, MRI, lymphoscintigraphy or fluorescent lymphography. Still there seems to be no universally used standardization for how to measure or report lymphedema in scientific contexts, which make comparison of studies difficult. Risk factors remains to be evaluated in correctly designed and sufficiently powered studies. However, lymphadenectomy per se [4-7], number of lymph nodes removed [6,8-16] and radiotherapy [3,7-11,14,17-20] seem to be established risk factor. Lymphedema onset may begin immediately after surgery or may be delayed for many years. Long-term follow-up is therefore necessary in order to establish reliable results on time of onset of lymphedema and to detect lymphedema in order to start early treatment. All published research seems unanimously

to conclude that lymphedema is an important factor with adverse effect on quality of life [7,11,21]. We found that much of the shortcomings are based on a fundamental lack of well-designed research and that there is a lack of standardization of terminology and methods of measuring lower limb lymphedema in research.

We conclude that there is a need for unanimous evidence-based international guidelines of terminology and methodology for diagnosis and treatment recommendations of lymphedema. We suggest and encourage the international scientific societies who deal with lymphedema to assemble and agree on international guidelines.

From a clinical point of view it is very important to emphasize that lymphedema is a chronic and progressive condition that, if untreated, can affect the quality of life adversely. It may bring years of suffering to the woman affected and established lymphedema is a serious condition that may be lethal. Today more women with gynecologic cancer become long-term survivors. This strongly increases the demand on the health care to provide adequate and reliable information concerning diagnosis, treatment and outcome including side effects and consequences, and to minimize the adverse impact of side effects of treatment on the health related quality of life.

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