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LETTER TO THE EDITOR

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Regional lymphadenectomy in advanced ovarian cancer: The enigma continues

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Abstract

The role of regional lymphadenectomy has always been a matter of discussion in the surgical management of solid tumors – Pelvic and para-aortic lymphadenectomy in ovarian cancer is one such issue. A recently published randomized trial suggested that regional lymphadenectomy in patients with advanced ovarian cancer is unlikely to offer a survival advantage. However, para-aortic and pelvic lymphadenectomy is warranted in the presence of macroscopically suspicious nodes to achieve complete cytoreduction. A long-term follow-up of the trial will demonstrate whether a prophylactic regional lymphadenectomy is associated with survival benefit in a subgroup of patients with advanced ovarian cancer who have grossly normal regional lymph nodes as evident in a widely open retroperitoneum.

Key words: Ovarian cancer; Lymphadenectomy; Survival; Retroperitoneum

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Core tip: Para-aortic and pelvic lymphadenectomy is warranted in macroscopically suspicious nodes in patients with advanced ovarian cancer to achieve complete cytoreduction.

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TO THE EDITOR

The therapeutic benefit of regional lymphadenectomy has always been a controversial issue in oncological surgeries. Whether pelvic and paraaortic lymphadenectomy should be performed in patients with ovarian cancer has also been a matter of contention for decades. It is still debatable whether lymphadenectomy only has value for proper staging and prognosis or if it also has therapeutic potential to improve survival. A randomized trial to compare systematic paraaortic and pelvic lymphadenectomy *vs* resection of only bulky nodes in patients with advanced ovarian cancer highlighted a significantly improved disease progression-free survival in the systematic lymphadenectomy group (29.4 mo *vs* 22.4 mo)^[1]. Another trial comparing regional lymphadenectomy *vs* resection of bulky nodes in patients with early ovarian cancer also suggested a trend towards a better five-year progression-free survival (78.3% and 71.3%), although the difference failed to reach statistical significance (difference = 7.0%, 95%CI: -3.4%-14.3%)^[2].

The lymphadenectomy in ovarian neoplasms (LION) trial, which was recently published in *New England Journal of Medicine*^[3], reported that systematic pelvic and paraaortic lymphadenectomy in patients with advanced ovarian cancer did not improve survival. However, one must be cautious before embracing the results of this trial as they are essentially applicable to a subgroup of advanced ovarian cancer patients only. A generalized statement against performing lymphadenectomy in any patient with advanced ovarian cancer based on the results of this trial would be premature. In the LION trial, the authors included those patients with advanced ovarian cancer who had “normal looking” lymph nodes in a “widely open” retroperitoneum. Subsequently, almost a quarter of the patients (23.8%, 203/853) who had bulky/suspicious nodes intraoperatively could not be included in the trial. Moreover, there is another subgroup of patients that have radiologically evident regional bulky nodes and require lymphadenectomy. These patients were definitely out of the purview of the LION trial, and lymphadenectomy in this group remains the standard of care to achieve macroscopic complete resection.

There are other confounders in the LION trial that have the potential to mask the therapeutic effect of lymphadenectomy in patients with advanced ovarian cancers. The inclusion of stage IV ovarian cancer patients (with 44 patients requiring pleurectomy) is likely to have blurred the benefit of lymphadenectomy, which is a loco-regional therapy. Moreover, any trial to assess the efficacy of a surgical intervention needs to be tested in a high-volume centre ensuring quality-controlled surgery. The low recruitment of the patients per centre (2.2/year) in the LION trial remains a key concern.

It may be concluded that paraaortic and pelvic lymphadenectomy is still warranted in macroscopically suspicious nodes in patients with advanced ovarian cancer to achieve complete cytoreduction. The LION trial indicated that regional lymphadenectomy may not offer a survival benefit in a subgroup of advanced ovarian cancer patients who have grossly normal regional lymph nodes, as evident in a widely open retroperitoneum. However, before we heed this LION's roar and change our practice, let us keenly await the long-term results of the LION trial.

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