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F. Liedberg

Lymph node dissection in bladder cancer were originally introduced by Skinner, when he 1982 reported new impressing survival data in patients with lymph node metastasis submitted to a meticulous lymph node dissection [1]. The question whether extended pelvic lymph node dissection improves survival in bladder cancer treated with radical cystectomy entails a large number of controversial aspects and difficult issues. To interpret the available literature some related questions can be raised:

Which Template is the Optimal Extended Template?

The lack of internationally accepted definitions of limited, standard and extended lymph node dissections in the literature is the main reason for the difficulties when interpreting the available literature. Some authors consider that an extended dissection ends where at the ureteric crossing of the common iliac vessels [2], the aortic bifurcation is considered as an extended dissection by others [3], whereas the inferior mesenteric artery is a possible upper limit according to some urologists [4]. To gain knowledge about location of lymph node metastasis in bladder cancer several lymph node mapping studies have been performed [3, 5–9]. However, when interpreting these lymph node mapping studies, one must be aware of the possible overlap of lymph node basins and anatomic assignment of extirpated nodes. This might also explain why almost the same materials have been used as arguments „for" [6] and „against" [7] a sentinel node region located in the endopelvic area. Still there is some support in the literature that some patients have isolated lymph node metastases above the iliac bifurcation [3, 5, 6]. Thus, an extended lymphadenectomy in bladder cancer is up to the aortic bifurcation, especially as these patients not necessarily show a worse outcome as compared with lymph node positive patients with positive nodes below the iliac bifurcation [10].

In the Absence of Randomized Studies, what are the Methodological Flaws in the Studies Available Regarding Extent of Lymphadenectomy and Survival?

Awaiting results from the German randomized multicenter study (AB 25/02-LEA) comparing lymph node dissection to the iliac bifurcation with dissection to the inferior mesenteric artery at cystectomy, presently only retrospective studies are available. Even if the results in these studies seem promising with regard to survival [11–16], the Will-Rogers-phenomenon [17] probably affects all these series to some extent [18].

Which Patients Should be Submitted to an Extended Lymph Node Dissection at Radical Cystectomy?

A thorough lymph node dissection and proper investigation of the lymph node specimen in an unselected cystectomy series in our hospital identified as many as 43 % of the patients as lymph node positive [3], some of these patients will receive adjuvant chemotherapy. An increasing number of elderly patients, many with significant comorbidity are nowadays submitted to radical cystectomy. As cure can be achieved with surgery only, also in presence of nodal disease [18], it seems reasonable to perform an extended lymph node dissection in these patients also, as they would poorly tolerate adjuvant chemotherapy. In each patient this has to be balanced against possible side effects due to a cephalad lymph node dissection, i.e. damage to autonomic nerves, possible surgical complications and prolonged surgical time. In order to make a correct distinction, knowledge about complications in the own institution is essential [19].

Are there any Secondary Benefits of Extended Lymph Node Dissection?

It is obvious that an extended lymph node dissection improves staging. Whether cystectomy combined with such dissection, plus or minus adjuvant chemotherapy, might translate into improve survival is unknown at present [20]. Pelvic recurrence after radical cystectomy almost enevitably leads to death. Furthermore, symptoms from pelvic recurrence often is difficult to palliate [21]. Proponents of extended lymph node dissection has shown decreasing incidence of pelvic recurrence after an appropriate lymph node dissection [22, 23].

Conclusions

Lymph node metastasis is a common finding at radical cystectomy affecting as many as 43 % of operated patients [2]. An extended dissection up to the aortic bifurcation has the best possibility to exstirpate all diseased nodes, data from a randomized German study will hopefully soon tell us, if this assumption is evidence based.

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