International Seminar 4: From Germany

2) Tumorspread and lymphnodes in the parametrial tissue and its clinical significance in the gynecology oncology

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There is always a concern for urinary tract, bowel injury and injury of the pelvic nerves caused by extensive dissections during radical hysterectomy. More extensive radicality in removing the parametrial tissue can be one of the cause for more morbidity especially for bladder injury and urinary tract fistulae. So in the past vesicovaginal fistulae and ureterovaginal fistulae rates of up to 2.5% and 1.9% was reported even in intitutions with large surgical experience. Preserving the nerve and vascular structures in the parametrial tissue can be essential for the rectal and bladder functioning too. So modifications of the Wertheim–Meigs radical hysterectomy was done in many institutions since many years reducing significantly the incidence of urinary tract fistulae with a comparable 5-year survival and to adapt the surgical radicality especially for patients with cervical cancer stage IB–IIA.

Tumor extension to the parametrial tissue is a very important factor in lymphnodal spread and survival. The percentage of lymph nodal invasion increases when the parametrial tissue are positive. In contrast to clinical staging by palpation tumor volume as measured by imaging methods have a more consistent relation to the parametrial involvement. The question whether maximum surgical radicality is always essential for all cases of cervical cancer has been analysed in many studies. Here parametrical nodes involvement has been one of the central questions for answering the possibility of tailoring surgical radicality.

Girardi (1989) reported on the study using giant sections positive parametrial nodes in 22.5%, in 3.4% for the smallest cervical cancer and 35% in the group of the largest tumors. For the small IB cases only 5.2% parametria are involved, mostly in the proximal medial part of the parametrial tissue.
By using semiserial stepping giant histological sections we analysed 326 cervical cancer for parametrial involvement and parametrial lymph nodes involvement. Location of the parametrial involvement (medial or lateral) in comparison to tumor volume and pelvic lymphnode metastases was done. For smaller cervical cancer with a median 1.47 cm$^3$ volume most of the parametrial involvement is located medial (Tulusan et al 1991). This supports the use of modified radical hysterectomy type II operation for smaller cervical cancer. Comparison of survival data from 1028 cervical cancer stage for cancer with a volume $<$2.5 cm$^3$ and 2-5 cm$^3$–10 cm$^3$ from three centers (Graz, Erlangen, Munich) showed a similar survival rates of 95% and 80%. In these cases the more radical hysterectomy type III was always used in Graz whereas in Erlangen the type II operations was consequently performed. (Burghardt, Baltzer, Tulusan et al 1992). Using this risk adapted tailoring operations the incidence of urinary fistulae was less than 0.5% (Tulusan et al 1988). For cervical cancer with largest volume $>$50 cm$^3$ radical operation type III is necessary.

More recently Winter (2002) showed for cervical cancer with volume $<$5 ml parametrial involvement of medial parametria was 3.8% and lateral parametria 2.2%. So involvement of the lateral parametrial portion is uncommon. Although all patients were treated by radical hysterectomy type III the survival rates were not different with the volume compared survival of the historical cases treated by type radical hysterectomy.

Conclusion: Tailoring radicality of surgery for smaller cervical cancer by using type II radical hysterectomy is an acceptable safe procedure with a low morbidity. For large cervical cancer type III radical hysterectomy removing the lateral part of the parametrial tissue is necessary.