Award Lectures

ESTRO Award Lecture

1199

Brachytherapy for paediatric malignancies: Institut Gustave Roussy's experience

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Purpose: Since 1970 our profesional life was carried out at the IGR. During the three last decades 13375 patients were treated by brachytherapy, among them, 150 children representing about 1% of this population. Excluding retinoblastomas and clear cell adenocarcinomas 131 cases are studied. We prefer selecting children rather than reporting an overview on our experience in brachytherapy, focusing on this largest literature series which enables comparison with the adult patients on whom we know the advantages of brachytherapy.

Population characteristics: 131 children, mean age 4.8 years (67.2% < 5 years). Pathology. RMS 68.7%, Undifferenciated sarcomas 9.2%, Yolk sac tumors 5.3%, others 16.8%. Staging: I 28.3%, II 34.6%, III 28.3%, IV 3.1%. Pathological nodes 13.7%, metastases 2.3%. Tumor sites: head and neck 35.1%, trunk-limbs 12.3%, gynecogical tract 24.4%, bladder-prostate 19.1%, other pelvis (including 3 anus) 9.1%.

Treatment protocol: Knowing the high chemosensitivity of children neoplasms, the sequelae induced by radiation therapy, the necessity of performing, as well as possible, a conservative treatment, the aim of our therapeutical strategy was, in the majority of cases: to start with chemotherapy, to decrease indications of non conservative surgery and external beam irradiation (EBI) and to realize, when necessary, a tailored LDR brachytherapy. Different brachytherapy techniques will be presented, tumour site by tumour site. Two kinds of brachytherapy were indicated: first line 63.8%, salvage 36.2%. In the first line brachytherapy group, chemotherapy was used in 86.4% of cases, surgery in 76.5%, EBI in 13.6%. Brachytherapy was realized with the tumor in place in 71.8% of cases. Brachytherapy parameters were: endocavitary 22.1%, interstitial 84.7%, mean dose 58.8 Gy, mean duration 6.42 days; tolerance good 88.5%, mean 10.2%, bad 1.5%.

Results: For all population we observed 5 year survival (SV, KM) 70%; local failures (LF) 23.7% and/or metastases (M) 24.6%. Complications (C) 28.2% (G1 3%, G2 12.9%, G3 12.2%). causes of death (CD): LF 8.4% and/or M 22.1%. 2nd malignancies (2nd Ca) 2.3%, intercurrent disease (ID) 1.5%.

According to the tumor sites results are – *Head and neck:* SV 76.8%, LF 19.6% and/or M 26.1%, C 37%. CD: LF 6.5% and/or M 21.7%, 2nd Ca 6.5%, ID 0%. *Trunk-Limbs:* 3 yr SV 68%, LF 31.3% and/or M 50%, C 12.5%. CD: LF 18.7% and/or M 50%, 2nd Ca 0%, ID 0%. *Gynecological tract:* SV 84%, LF 9.4% and/or M 9.4%, C 34.4%. CD: LF 3.1% and/or M 9.3%, 2nd Ca 0%, ID 3.1%. *Bladder-Prostate:* SV 55.8%, LF 44% and/or M 20.8%, C 12%. CD: LF 20% and/or M 16%, 2nd Ca 0%, ID 0%. *Other pelvis:* SV 50%, LF 25% and/or M 33.3%, C 33.3%. CD: LF 16.6% and/or M 33.3%, 2nd Ca 6,5%, ID 8.3%.

Conclusion: If several tumoral sites are comparable in children and adult patients therapeutic strategies, including brachytherapy, can be very different in the two populations. Brachytherapy in childhood malignancies requires large experience with adult patients treated with this irradiation modality, considerable expertise and close collaboration with other specialists (pediatricians, surgeons, pathologists, radiologists, physicists...).

ESSO Award Lecture

1200

Lessons from clinical trials in surgical oncology: Time for a new paradigm?

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Randomized clinical trials are important in evaluating interventions for the prevention diagnosis and treatment of cancer. They are ethical in the presence of uncertainty and in the age of evidence based medicine, ever more important. In comparison to medical treatments (drugs) tested, prospective, controlled randomized studies are more sparse in the evaluation of (new) surgical approaches. Where-as numerous trials have been carried out on the value of adjunctive treatments to surgery by local measures as radiotherapy or the effect of systemic therapy, they have neglegted the important factor of the surgeon and the surgical procedure as prognostic factors. These aspects need standardization in order the evaluate the adjunctive measures properly. The past decades have been ruled by the paradigm that variations in local regional treatment have no effect on survival, since this was determined by already present micro-metastasis. Both in sarcoma, breast and colorectal cancer surgery this paradigm has been helpful in the development in organ-sparing techniques, thereby improving the quality of life of the cancer patient. However many trials lacked standardization of surgery, quality control of the procedures and well described manuals of care for the perioperative procedures. Only in trials where emphasis is placed on these aspects with strict compliance rules, the value of additional therapies can be adequately evaluated. More-over participation to trials in which surgical procedures are highly standardized will directly benefit the patient. On the basis of numerous examples to be given on the influence of the surgeon and surgical procedure not only on loco-regional control, but also on survival we have to revise the outdated paradigm emphasizing the value of loco-regional control. Advances in surgical techniques earlier diagnosis and a better understanding of the patterns of spread of individual cancer have allowed surgeons to perform successful resections for an increased number of patients. Newer strategies have prompted surgeons to reassess the magnitude of surgery necessary putting a higher demand on the quality of the procedure. In taking initiative in this strategy with a better training in techniques, but also in trial participation the cancer surgeon will play an ever more important role in the defining new treatments in the next millenium.

Plenary Lecture

1201

Abstract not received.