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SPLIT-COURSE IRRADIATION IN THE TREATMENT OF LARYNX CARCINOMA. Jean-Marie Deneufbourg. Radiotherapy Department-University Hospital - Liège - Belgium.

For the past seven years, we have routinely used split course irradiation as radical treatment of larynx cancers. A sufficient number of cases has now been treated to allow evaluation of results at five years.

Our survey consists of 201 male patients, the majority between the sixth and eighth decades. There were 115 supraglottic cancers and 86 vocal cords tumours. All cases had histologic confirmation of epidermoid carcinoma. The minimum follow-up period is 3 years.

The radiation treatment was delivered by γ rays of Cobalt through two opposed lateral portals. Our original fractionation consists of two irradiation periods separated by a 15 days rest interval. Each part of the radiotherapy regime comprises 6 fractions of 4 Grays (tumour dose) over 2 weeks. The Time-Dose-Fractionation value is 103, iso-effect of 63 Grays/30 fractions/6 weeks.

The 5 years survival amounts to 51% for the whole series and 67% for the determinate group (DG). Cure rates of vocal cords cancer are respectively 68% for T1 (87% DG), 50% for T2 (78% DG), 44% for T3 (56% DG) and 25% for T4 (25% DG). Patients with limited supraglottic tumours (T1 + T2) survived in 50% of cases (69% for DG) and those with extensive tumours (T3 + T4) in 30% of cases (43% for DG).

Acute and delayed radiation side-effects were strongly reduced with the split-course technique as compared to historical controls treated by conventional fractionation. Evaluation of several parameters of tolerance has shown that major complications were quite uncommon. The hypofractionation also bears valuable social advantages.

An original split-course irradiation has proved effective in larynx cancer treatment and functional results appear to be significantly better.