1-2 minutes of clinicians time. The output obtains a complex radiobiologic report and a graphical picture with a „Terapeutic Ratio" for a relevant protocol.

Results

Comparison of rivals protocols for Ca of Uterine Cervix IIB, III (2 LDR insertions/20 Gy + EBRT 40,8 Gy versus 4 HDR insertions + EBRT 40.8 Gy) follows to an isoeffective HDR dose/fr = 6.65 Gy. Critical % doses (related to NTCP $_{\text{rectum, bladder}}$ -5%) are 65% and 80% respectively. It correlates with a maximum „Benefit function" defined as BF-TCP (1-NTCP).

Conclusion

The contribution shows a simple and potentially useful approach for computing more realistic isoeffect relations for tumour, early and late responding tissues when comparing different radiotherapeutic protocols. It offers a real chance to optimize a „Therapeutic gain" as a final goal of radiation therapy.

ADJUVANT TREATMENT OF PATIENTS WITH RECTAL CANCER

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Adjuvant postoperative radiotherapy combined with chemotherapy is considered a standard management of rectal cancer patients with increased risk of local recurrence. In this study we evaluated the results of adjuvant chemo- and radiotherapy after radical surgery in 64 patients with rectal carcinoma with special reference to tolerance of treatment. All patients underwent radical surgery: anterior abdominal resection in 26, abdominoperineal resection in 19 and Hartman resection in one. Thirty three patients were postoperatively staged as Dukes B2 and 31 patients - as Dukes C. All patients received postoperative chemo-radiotherapy. Treatment included megavoltage irradiation with two parallel opposed fields to small pelvis at a dose of 45 Gy in 23-25 fractions and concomitant chemotherapy with 5-Fluorouracil during first three and last three days of irradiation.

Main early complications from chemoradiation included diarrhea (58%), nausea and vomiting (15%), dysuria (6%), leukopenia (31%) and anaemia (4%). In total, acute side effects occured in 42 patients (66%) and in 16 of them (25%) were of grade 3 or 4. Three patients did not complete the treatment due to exacerbation of side effects and/or serious deterioration of performance status. Late complications, mainly from bowels and urinary bladder, occured in 19 patients (30%) and six of then (9%) were severe.

Nineteen of the 64 evaluated patients have deceased ill now. Median survival was 29 months (4 to 50 months). Local recurrence was seen in 14 patients (22%) and distant metastases - in 18 (28%).

Results of our study show that postoperative radiochemotherapy in rectal cancer patients is accompanied by a large number of acute and late complications. Literature data demonstrate that better tolerance of treatment may be achieved with the use of special surgical techniques preventing the replacement of small intestines to the pelvis after rectal amputation. Further improvement may be achieved with the use of multiple radiation fields, computerized treatment planning and customized blocking. Another option is an application of preoperative radiotherapy - the approach becoming recently more commonly used.