THE TECHNIQUE OF INTENSITY-MODULATED RADIOTHERAPY IN THE TREATMENT OF CHOLANGIOCARCINOMA

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Aims and background: Conventional radiotherapy in inoperable cholangiocarcinoma is limited by radiotolerance of the surrounding tissues. The aim of our dosimetric study was an evaluation of intensity-modulated radiotherapy in the treatment of inoperable bile duct carcinoma.

Methods: Four patients with inoperable cholangiocarcinoma treated by self-expandable stent placed to the biliary tree and radiotherapy were studied. The rotational technique, conformal 3D BOX technique and intensity-modulated radiotherapy plan were compared. Dose volume histograms and the normal tissue complication probability concept were used for comparison. The stent was used for target motion verification.

Results: The intensity-modulated radiotherapy plans showed favorable dose distribution in planning target volume and remarkable sparing of organs at risk.

Conclusions: The intensity-modulated radiotherapy technique in bile duct carcinomas deserves further research and clinical evaluation.

Key words: bile duct carcinoma, intensity-modulated radiotherapy.