局部晚期宫颈癌基于MRI图像的三维近距离治疗的临床疗效分析

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Title: **Clinical efficacy of MRI image-based three-dimensional brachytherapy in locally advanced cervical cancer**

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关键词: 宫颈癌; 调强放疗; 磁共振成像; 三维近距离治疗

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摘要: 目的：分析局部晚期宫颈癌调强放疗疗（intensity modulated radiation therapy,IMRT）同步化疗及基于MRI图像的三维近距离治疗的临床疗效及毒副反应。方法：选取四川省肿瘤医院及成都市第五人民医院2014年1月至2017年2月初治的宫颈癌患者（FIGO分期：Ⅱb-Ⅳa期）126例，所有患者接受IMRT盆腔外照射及MRI图像为基础的高剂量率三维近距离治疗，每次近距离治疗前需完善CT和/或MRI图像扫描，至少完成2次MRI图像扫描，高危临床靶区（HR-CTV）及危及器官（OARs）按照GEC-ESTRO标准定义，HR-CTV处方剂量达到80~85 Gy（EQD2），并同步顺铂为基础的化疗，使用CTCAE及RTOG标准评估毒副反应，Kaplan-Meier法计算局部控制率、总生存率、无病生存率。结果：靶区GTV、HR-CTV、IR-CTV D90平均EQD2分别为91.7(81.8~107.8) Gy、81.7(77.8~89.9) Gy、72.0(70.8~75.1) Gy（α/β=10）。100%处方剂量对应HR-CTV、IR-CTV的V100分别为 92.6%(89.9%~97.4%)和92.8%(88.5%~96.8%)。3年局部控制率、无病生存率、总生存率分别为89.5%、78.2%和80.9%。Ⅲ级慢性消化道和泌尿生殖道毒副反应发生率分别为2.5%和5.8%，无Ⅳ级毒副反应。结论：调强放疗同步化疗及基于MRI图像的三维近距离治疗局部晚期宫颈癌显示了较好的临床疗效及可耐受的毒副反应。

Abstract: Objective：To analyze the clinical efficacy and adverse reactions of IMRT combined with chemotherapy and MRI image-based intracavitary brachytherapy in locally advanced cervical cancer.Methods：126 cervical cancer patients (FIGO staging：Ⅱb-Ⅳa) were prospectively analyzed in Sichuan Cancer Hospital and Chengdu Fifth People's Hospital from January,2014 to February,2017.All patients received IMRT external beam radiotherapy and MRI image based high dose rate of three-dimensional brachytherapy.Each brachytherapy required perfect CT and (or) MRI image scanning，and at least 2 MRI scans were performed.The high-risk clinical target volume (HR-CTV)and organs at risks (OARs) were defined according to the GEC-ESTRO standards.HR-CTV prescription dose reached 80~85 Gy (EQD2)，with concomitant chemoradiotherapy of cisplatin.CTCAE and RTOG criteria were used to evaluate the adverse reactions.The Kaplan-Meier method was used for survival analyses.Results：The average EQD2 of the target region GTV,HR-CTV,and IR-CTV D90 were 91.7 (81.8~107.8) Gy,81.7 (77.8~89.9) Gy,72.0 (70.8~75.1) Gy (α/β=10) respectively. The V100 of 100% prescription dose corresponding to HR-CTV and IR-CTV was 92.6% (89.9%~97.4%) and 92.8% (88.5%~96.8%) respectively.Three-year follow-up data showed that the local control rate (LC)，disease-free survival rate (DFS)，overall survival rate (OS) were 89.5%，78.2% and 80.9% respectively.The toxicity incidences of chronic gastrointestinal tract (GI) and genitourinary system (GU)in grade Ⅲ were 2.5% and 5.8% respectively，and there was no grade Ⅳ toxicity.Conclusion：IMRT combined with chemotherapy and MRI image-based intracavitary brachytherapy in locally advanced cervical cancer showed a better outcome and tolerable side effects.

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备注/Memo: -

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