

Trimodality therapy for bladder cancer : Initial experience of moving from conventional to hypofractionation

Anuradha Krishnan, Sheetal Kashid, Namrata Pansande, Gitanjali Panigrahi, Pallavi Singh, Reena Ph, Priyamvada Maitre, Vedang Murthy
Department of radiation oncology, Tata Memorial Hospital, Mumbai

Tata Memorial Hospital



INTRODUCTION

Traditionally, bladder preserving Chemoradiation for invasive bladder cancer is treated by conventionally fractionated radiotherapy (Conv-RT) to 64Gy.

A recent meta-analysis reported the non-inferiority with moderately hypofractionated schedule (Hypo-RT) of 55Gy in 20 fractions.

We present our initial experience on acute toxicity and challenges related to concomitant chemotherapy and pelvic irradiation with Hypo-RT.

METHODS

Patients with biopsy proven, non-metastatic, high-grade urothelial bladder cancer with clinical stage T2-T3, N0-N1 treated with Hypo-RT (55Gy/20#/4weeks) between December 2021 to April 2022 were analysed.

A similar cohort of consecutive patients treated with Conv-RT (64Gy/32#/6.5weeks) between January 2018 to November 2021 were included as the historical cohort.

All patients were treated with adaptive plan-of-the-day radiotherapy (ART) with daily image guidance and IMRT technique.

Acute toxicity, defined as toxicity during the course of RT up to a period of 3 months post RT, was assessed using the RTOG and CTCAE criteria.

Details regarding neoadjuvant, concurrent chemotherapy and target volumes were analysed in both cohorts.

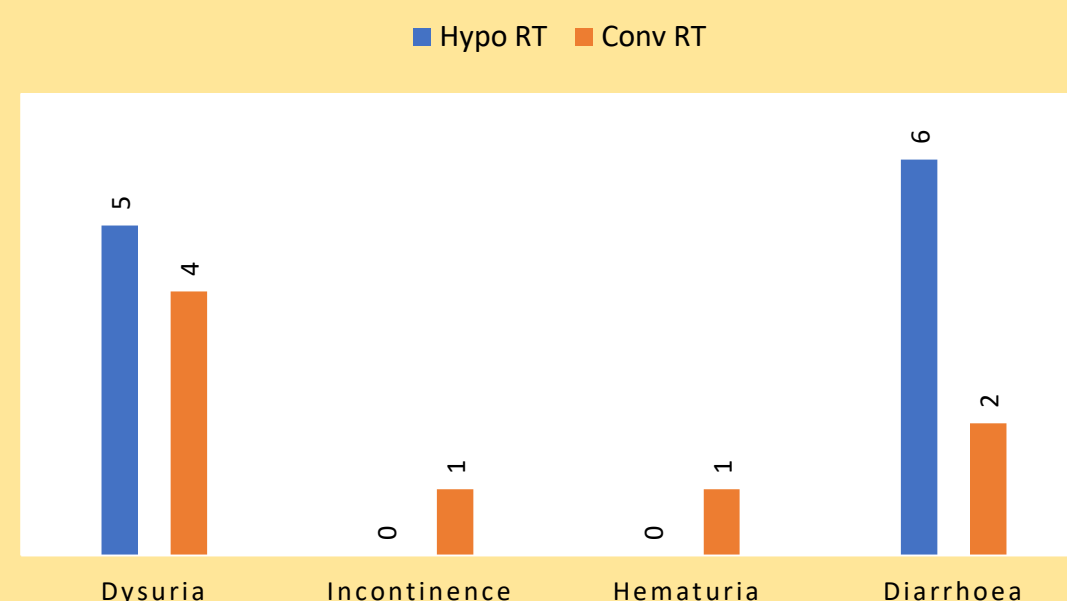
RESULTS

30% in Hypo-RT and 40% of patients in Conv-RT cohort received NACT and 80% received concurrent gemcitabine or cisplatin in each of the cohorts.

The target volume included regional pelvic nodes in 80% patients in each cohort.

	Hypo RT 36 patients	Conv RT 40 patients
Acute Gr 2 GU toxicity	14%	15%
Acute Gr 2 GI toxicity	16.7%	5%

There were no grade 3-4 toxicities with either of the two schedules.



Toxicity related early termination or major treatment breaks (>7 days) occurred in 4 patients in Conv-RT cohort and 1 patient in Hypo-RT cohort.

CONCLUSION

Hypo-RT schedule had modestly increased and mostly self-limiting grade 2 acute GI toxicity compared to Conv-RT.

Hypo-RT was well tolerated and can be safely used for bladder preservation along with concomitant chemotherapy and pelvic irradiation in patients with bladder cancer.