Retrospective Study of Neoadjuvant Radiotherapy for Locally Advanced Surgically Inoperable Endometrial Carcinoma

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INTRODUCTION

- Minority of patients with endometrial carcinoma (EC) present with locally advanced surgically inoperable disease, e.g. bulky cervical involvement and parametrial extension.
- The optimal treatment strategy remains controversial. The evidence for neoadjuvant radiotherapy (NART) is limited with few patients having parametrial involvement.

AIM

To report the oncological outcomes, surgical outcomes and adverse effects of NART followed by extrafascial hysterectomy for locally advanced surgically inoperable EC in an oncology centre in Hong Kong.

METHOD

- Retrospective cohort study of consecutive patients with locally advanced EC who received NART between January 2010 and June 2024
- Upfront inoperability determined by multidisciplinary meetings composed of gynaecologists, oncologists and radiologists
- Primary outcome: Complete resection (R0) rate at hysterectomy
- Secondary outcomes: pathological response, toxicities, disease-free survival (DFS), overall survival (OS) estimated with Kaplan-Meier
- DFS = time from biopsy-proven diagnosis to first recurrence or death
- OS = time from biopsy-proven diagnosis to death from any cause
- FIGO 2009 staging system and CTCAE 5.0 classification of toxicities were used

RESULTS

- 37 patients who had NART were included (Fig. 1).
- Median age was 57 years. Median BMI was 24.6.
- All staged clinically, while 89% were also staged with MRI.
- Most common histology was **endometrioid carcinoma (69.4%).**
- 100% had cervical and **70.3% had parametrial involvement**.

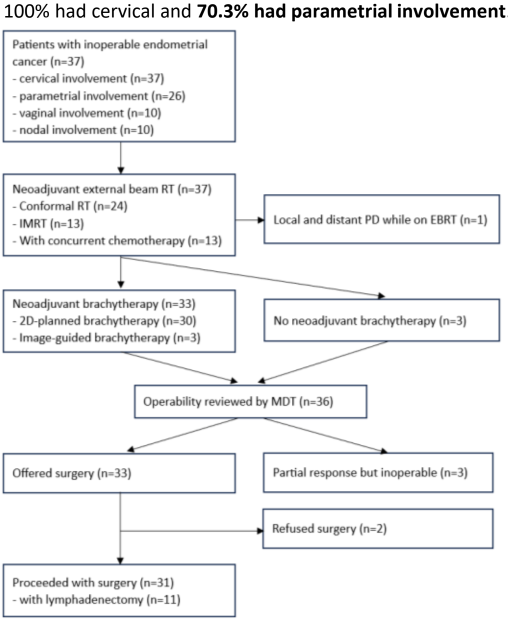

Fig 1. Summary of patients' initial disease involvement and treatment received

- 31 patients (84%) had surgery, **all achieved complete resection (R0)**.
- **Pathological response**: complete response (pCR) in 9 patients (29%), while 7 patients (22.6%) had microscopic residual disease only.
- **Downstaging effect:** 61.3% of patients downstaged to ypT0/1, N0/x.
- **Oncological outcomes at 5 years** (medial follow-up 46 months)**:**

Local control	Regional control	Distant control	DFS	OS (Fig. 2)
100%	86.4%	83.4%	80.2%	76.3%

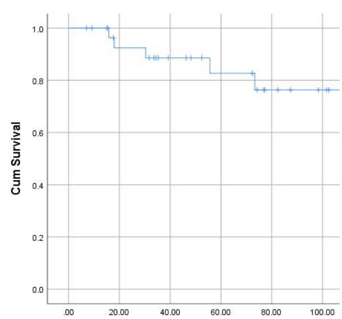

Fig 2. KM curve of OS in months

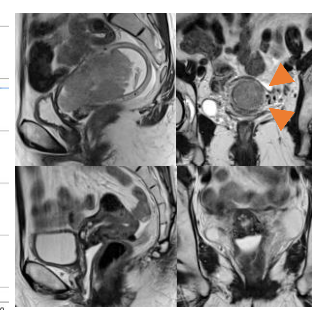

Fig 3. MRI of EC with bulky cervical and left parametrial involvement (arrows). Upper panel: at diagnosis. Lower panel: after external RT.

- **Safety and Toxicities:**
  - **Acute RT toxicities:** any grade 83.8%, Gr ≥3 2.7% (diarrhoea)
  - **Surgical morbidities:** Median blood loss 200mL, operation time 93 mins, hospital stay 6 days, gapped wound 9.7%.
  - **Chronic toxicities:** any grade 27%, Gr ≥ 3 8.1% (cystitis, fistula)

CONCLUSIONS

NART is feasible for locally advanced upfront inoperable EC with cervical and parametrial involvement, resulting in high R0 rate, pCR, locoregional control, DFS and OS. Acute RT toxicities were tolerated. Surgery in the post-RT setting was generally safe. Further research is warranted to optimise treatment efficacy and prevent long-term toxicities in the IGBT era.

KEY REFERENCES

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