Phase I Study of Concurrent Chemoradiotherapy for Locally Advanced Uterine Cervical Cancer

Forum for Nuclear Cooperation in Asia (FNCA)
Application of Radioisotopes
And Radiation for Medical Use

Objectives

1. Evaluate the acute toxicity of concurrent chemo -radiotherapy using two dose levels of cisplatin (30mg/m^2/week or 40mg/m^2/week) in patients with locally advanced cervical cancer

2. Determine the clinically recommended dose (RD) of cisplatin

Hematological Toxicity
(Summary)

Level	#Pts	WBC				Neutro				Hb				PLT			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
1	13	4	6	1	0	4	3	1*	0	2	5	0	0	0	0	0	0
2	17	2	1	6	0	1	2	4*	0	2	3	0	0	1	2	0	0

* usage of G-CSF

DLT: Level 1: 0/13, Level 2: 0/17

Non-hematological Toxicity
(Summary)

Level	#Pts	U-GI				L-GI				GU				Skin				#cycle			
		1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	2	3	4	5
1	13	11	0	0	0	7	3	0	0	4	0	0	0	9	4	0	0	0	2	0	11
2	17	6	5	1	0	3	2	0	0	1	0	0	0	10	1	0	0	1	2	2	12

DLT: Level 1: 0/13, Level 2: 1/17

Summary of the Results

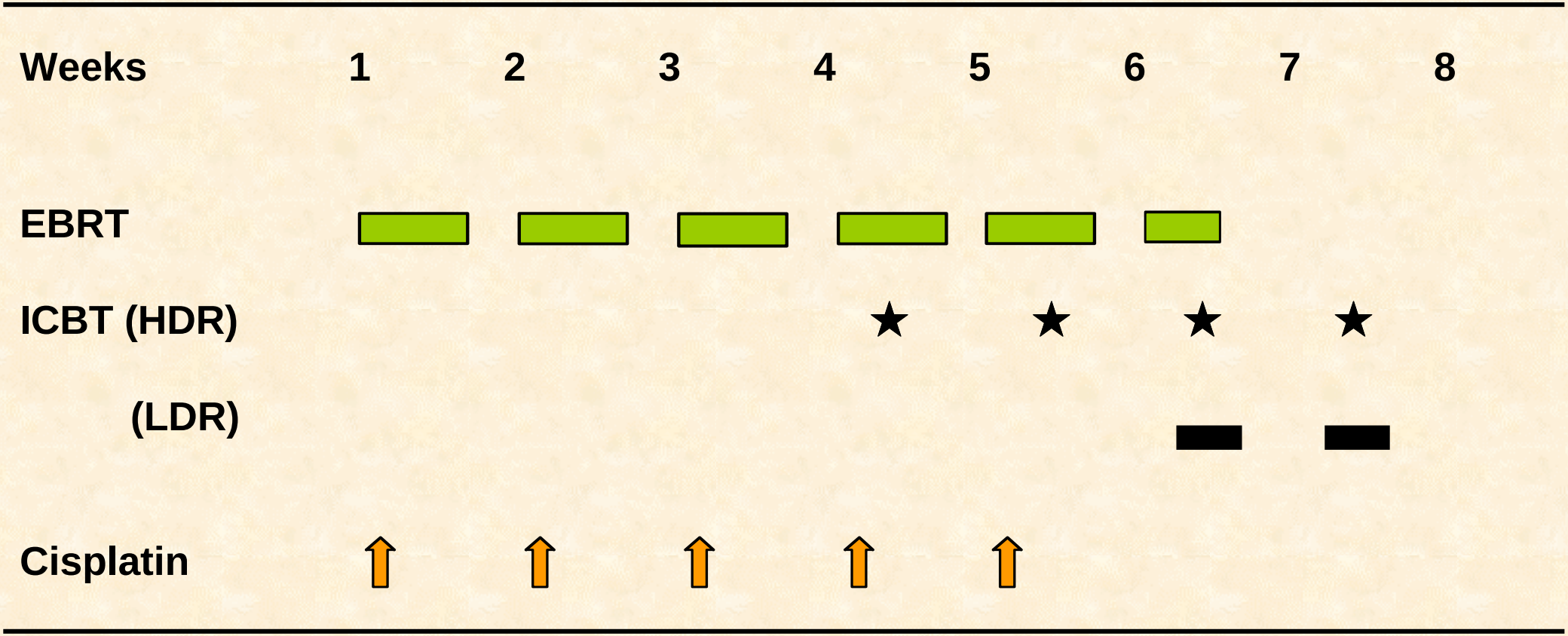
1. Acute toxicities of concurrent chemoradiotherapy using two dose levels of cisplatin (level 1: 30mg/m^2, level 2: 40mg/m^2) were assessed.

2. In the level 1, 0/13 patients developed the DLT.
   In the level 2, 1/17 patients developed the DLTs.
   From these results, the level 2 dose was determined the RD.

3. In the level 2, the grade 3 neutropenia occurred in 4/17 patients, who needed the G-CSF for their myelosuppression.

4. In the level 2, the grade 2-3 upper GI symptoms (nausea, vomiting, loss of appetite) occurred in 6/17 patients, who needed frequent administration of the ant-emetics.

Treatment Protocol



EBRT: 1.8～2Gy/fr, 5fr/week　Whole Pelvis:30Gy + Central Shield:20Gy
ICBT: HDR treatment:18～28Gy/3～4fr (5～7Gy/fr)
LDR treatment: 30～40Gy/1～2fr
Cisplatin:30 or 40 mg/m^2/weekly, week 1～week 5

Dose Escalation Schedule

Dose Level:

Level 1: Cisplatin 30mg/m^2/week
Level 2: Cisplatin 40mg/m^2/week

Dose Limiting Toxicities:

1. Grade 4 hematological toxicities
2. Grade 3 non-hematological toxicities
3. Interruption of radiotherapy $\geq$ 2 weeks
4. Interruption of chemotherapy $\geq$ 3 cycles

Dose Escalation Schedule

Level 1: Overall incidence of DLT $\geq$ 1/3
→ Level 1 is judged unacceptable

Level 1: Overall incidence of DLT < 1/3
→ Level 1 is judged acceptable → Dose escalation to Level 2

Level 2: Overall incidence of DLT $\geq$ 1/3
→ Level 2 is judged unacceptable → Level 1 is the RD

Level 2: Overall incidence of DLT < 1/3
→ Level 2 is acceptable → Level 2 is the RD