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Efficacy and safety of amrubicin after treatment with immune checkpoint inhibitor combined with chemotherapy in extensive-stage small cell carcinoma: MiSSION1.

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BACKGROUND

- Previous studies have shown that adding immune checkpoint inhibitor (ICI) to chemotherapy for extensive-stage small cell lung cancer (ES-SCLC) is effective and is currently the first-line treatment.
- Amrubicin is recommended as a second-line treatment for ES-SCLC in the guideline, and it is frequently used in Japan.
- Here, we report a retrospective study on the efficacy and safety of amrubicin as a second-line treatment for ES-SCLC after ICI therapy.

METHODS

- This study enrolled patients with ES-SCLC treated with amrubicin as a second-line from April 2012 through December 2021.
- Patients were divided into two groups: patients previously treated with ICI (pre-ICI group) and those without previous ICI treatment (no-ICI group).
- The efficacy and the incidence of adverse events were compared between the two groups.

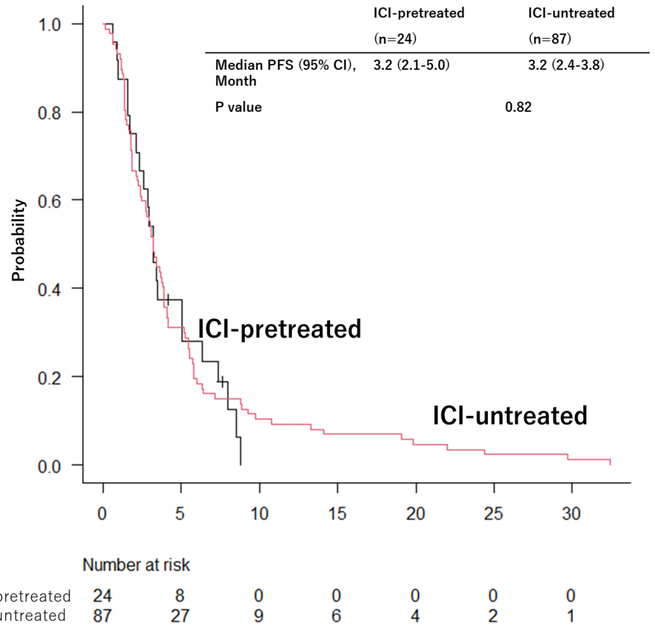
RESULTS

- Hundred and fifty patients were enrolled from 6 centers in Japan, and 123 of them were eligible for analysis (Table 1).
- The objective response rate was 29.6% in the pre-ICI group and 22,2% in the no-ICI group.
- The median-time-to-treatment failure was 3.74 months and 2.77 months (HR, 1.14; 95%[CI] 0.90-1.44), the PFS was 3.20 months and 3.21months (HR, 0,97; 95% [CI], 0.76-1.23) and the median OS was 8.2 months and 8.0 months (HR, 1.09; 95% [CI]0.83-1.44) in the pre-ICI group and no-ICI group, respectively (Figure 1, 2).
- One patient (4.3%) from the pre-ICI group and11 patients (11.5%) from the no-IC group discontinued amrubicin due to adverse events.

Table 1 Patient characteristics

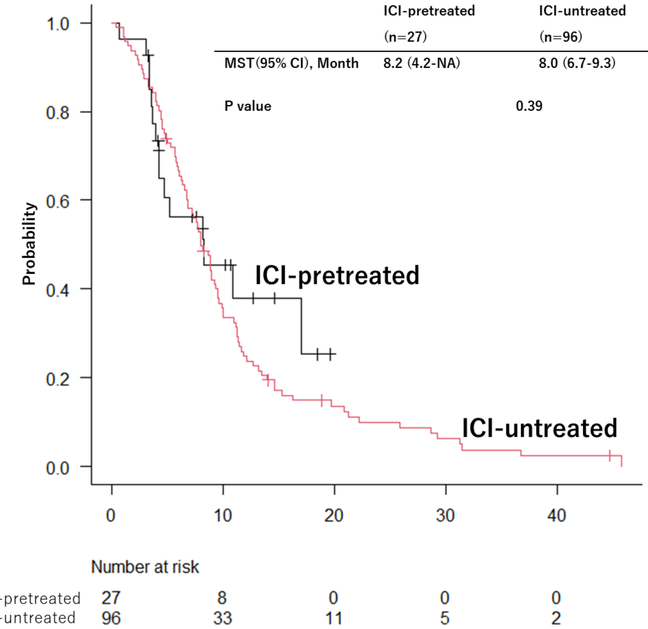
Patient characteristics	Group	ICI-pretreated	ICI-untreated
n		27	96
Gender	Male	26 (96.3)	79 (82.3)
	Female	1 (3.7)	17 (17.7)
Age (%)	<70	10 (37.0)	48 (50.0)
	>=70	17 (63.0)	48 (50.0)
ECOG PS(%)	0	8 (29.6)	34 (35.4)
	1	16 (59.3)	49 (51.0)
	2	3 (11.1)	11 (11.5)
	3	0 (0.0)	2 (2.1)
Brain metastasis (%)	Negative	19 (70.4)	60 (62.5)
	Positive	8 (29.6)	36 (37.5)
Liver metastasis (%)	Negative	21 (77.8)	62 (64.6)
	Positive	6 (22.2)	34 (35.4)
Malignant pleural effusion (%)	Negative	20 (74.1)	72 (75.0)
	Positive	7 (25.9)	24 (25.0)
Bone metastasis (%)	Negative	16 (59.3)	67 (69.8)
	Positive	11 (40.7)	29 (30.2)
Adrenal metastasis (%)	Negative	19 (70.4)	78 (81.2)
	Positive	8 (29.6)	18 (18.8)

Figure 1. Progression free survival



	ICI-pretreated (n=24)	ICI-untreated (n=87)
Median PFS (95% CI), Month	3.2 (2.1-5.0)	3.2 (2.4-3.8)
P value		0.82

Figure 2. Overall survival



	ICI-pretreated (n=27)	ICI-untreated (n=96)
MST(95% CI), Month	8.2 (4.2-NA)	8.0 (6.7-9.3)
P value		0.39

Table 2 Adverse events

Adverse events	ICI-pretreated group		ICI-untreated group	
N	27		96	
	Any Grade	Grade 3 <=	Any Grade	Grade 3 <=
Febrile neutropenia	6 (22.2)	6 (22.2)	23 (24.0)	23 (24.0)
Anemia	23 (85.2)	3 (11.1)	68 (70.8)	13 (13.5)
Neutropenia	23 (85.2)	17 (63.0)	87 (90.6)	68 (70.8)
Thrombocytopenia	16 (59.3)	5 (18.5)	50 (52.1)	18 (18.8)
Pneumonitis	1 (3.7)	1 (3.7)	7 (7.3)	4 (4.2)

CONCLUSIONS

- This study shows that the efficacy of amrubicin in ES-SCLC remains unchanged irrespective of previous treatment with ICI.
- Furthermore, serious adverse events were not increased by the use of ICI.

CONTACT

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