

一般演題3 O3-1

The Significance of a Cooperative Medical System for Treating Decompression Illness on the Izu Peninsula in Japan

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Introduction—In 2011, our hospital on the Izu peninsula began to hold meetings to discuss how to manage patients with decompression illness (DCI) to establish a cooperative medical system. We retrospectively investigated the influence of these meetings and the changes subsequently effected.

Methods—A medical chart review was retrospectively performed to investigate all cases between January 2005 and December 2017 in which the transport of patients with DCI via a physician-

staffed helicopter emergency medical service (HEMS) was attempted. The patients were divided into 2 groups: the preprogram group and the postprogram group.

Results—There were 63 patients in the preprogram group and 65 in the postprogram group. There were no cases in which a patient's symptoms deteriorated during transportation by the HEMS. The frequency of dispatch to the scene for direct evacuation in the postprogram group (86%) was greater than that in the preprogram group (74%), but the difference was not statistically significant ($P=0.09$). In the postprogram group, the duration of activities at the scene or the first aid hospital was significantly shorter in comparison to the preprogram group ($P=0.01$).

Conclusions—This retrospective study revealed simultaneity between the introduction of the yearly meetings and a reduced duration of the HEMS staff's activity at either the scene or the first aid hospital.

Table 1. Results of the analysis

Variable	Preprogram (n=63)	Postprogram (n=65)	P value
Sex (male/female)	34/29	43/22	0.15
Age (y)	45±15	44±13	0.86
At scene/Transportation	47/16	56/9	0.09
Mild/Severe symptoms	6/57	1/64	<0.05
Incidence-HEMS request (min)	76±226	61±248	0.39
Activities at scene by HEMS (min)	26±16	20±10	0.01
Transportation to base/HBO hospital	4/57*	17/48	<0.01
Incidence-arrival at hospital (min)	149±237	112±225	0.62

HEMS, physician-staffed helicopter emergency medical service; HBO, hyperbaric oxygen therapy.

*Airlift of 2 patients was canceled after the dispatch of the HEMS because of misdiagnosis of decompression illness.

Table 2. Final outcome of patients who were transported to the base (our) hospital (n=23)

Outcome	Preprogram (n=6)	Postprogram (n=17)	P=0.06
Cancel of dispatch	2	0	
Go home	1	8	
Survival after admission	0	1	
Fatal outcome	3	8	