



Clinical profile of chronic cluster headaches (CCH) in a regional headache center in Japan

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【Background】

- CCH is a refractory headache that lowers quality of life, but little is known about the characteristics of CCH in Japan.

【Object & Methods】

- Nineteen consecutive patients with CCH visiting at a tertiary headache center (Tominaga hospital) from February 2011 to July 2020.
- The diagnosis of CCH was confirmed according to the ICHD-3 structured questionnaires, following complete neurological examinations and appropriate tests.
- We compared the clinical features of CCH according to the onset pattern (primary CCH vs secondary CCH).

【Results】

- Patients with CCH accounted for 4.2% (19/420) of CH.
- The demographic characteristics of the study participants are shown in Table 1 and the detailed treatment results are provided in Tables 2.
- Nine (47.4%) patients were primary CCH and remaining 10 (52.6%) patients were secondary CCH.
- In one primary CCH patient, CH attacks had disappeared. Two secondary CCH patients migrated to episodic CH. Eight patients have persistent CCH. Two patients were transferred because of relocation and remaining six patients discontinued outpatient visits (Table 3).
- Home oxygen therapy (HOT) approved in Japan in April 2018 was effective in 6 out of 7 cases. Six patients who discontinued outpatient visits had discontinued their visits before April 2018, so they had never used HOT (Table 4).

Table 1. The demographic characteristics of the study participants

	Total CCH	Primary CCH	Secondary CCH
N	19 (M:F=17:2)	9 (M:F=7:2)	10 (M:F=10:0)
Age at clinic visit (mean ± SE)	38.4 ± 12.6	32.0 ± 8.0	43.4 ± 5.5
Age at onset (mean ± SE)	30.1 ± 11.6	30.0 ± 14.6	31.2 ± 8.3
Age at CH <u>chronification</u> (mean ± SE)	36.4 ± 12.3	30.0 ± 14.6	42.2 ± 5.2
Comorbid migraine	4 (21.1%)	2 (22.2%)	2 (20.0%)
Family <u>hystory</u>	0	0	0
Current smoker	12 (63.2%)	3 (33.3%)	9 (90.0%)
Alcohol consumer	7 (36.8%)	3 (33.3%)	4 (40.0%)
History of head injury	2 (10.5%)	1 (11.1%)	1 (10.0%)
BMI (kg/m ² , mean ± SE)	23.3 ± 3.8	23.4 ± 5.2	23.2 ± 2.4
BMI ≥ 25	3 (15.8%)	1 (11.1%)	2 (20.0%)

Table 2. Treatment performed in CCH cases

	N	Dose
Abortive		
Subcutaneous <u>sumatriptan</u>	18	0.3 mg
Oxygen inhalation	10	7L/min, 15minutes
<Home oxygen therapy: 7>		
<u>Sumatriptan</u> nasal spray	6	20 mg
Short term preventive		
Oral <u>prednisolone</u>	6	30-60 mg (1-2 week)
Intravenous <u>methylprednisolone</u>	3	1000 mg (consecutive 3 days)
Preventive		
<u>Verapamil</u>	19	120-240 mg
Lithium	8	100-400 mg
<u>Valproate</u>	11	400-800 mg
<u>Gabapentin</u>	3	200-600 mg
<u>Lomerizine</u>	3	10-20 mg
<u>Topiramate</u>	2	25-100 mg

Table 3. Outcome of the patients with CCH

	N	Continuation of CCH	Conversion from CCH to ECH	Remission
Primary CCH	9	8	0	1
Secondary CCH	10	8	2	0
Total	19	16	2	1

Table 4. HOT reduces self-discontinuation of outpatient consultation.

	Self-discontinuation of outpatient consultation		
	+	-	
HOT	+	0	7
	-	6	12
Total		6	12

【Discussion & Conclusions】

- Patients with CCH in Japan had male dominant and later age onset.
- The duration of evolution in patients with secondary CCH is a long interval after CH onset.
- There were more smokers in the secondary CCH.
- HOT reduces self-discontinuation of outpatient consultation. The quality of life of CCH patients in Japan has been improved by HOT.
- Because some cases are refractory, it is wanted to introduce treatments such as neuromodulation and nerve block in Japan.
- As in other Asian countries, number of cases of CCH in Japan is low, so it is necessary to accumulate cases in the future.

Disclosures, last 2 years – [Takao Takeshima, Deputy President, Tominaga Hospital]

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