

Short Communication

A Cohort Study of Patients with Stroke in Shimane Prefecture

(cerebral strokes/health guidance/diet)

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Of 55 Japanese patients with stroke, only 12% ate a low salt diet and 21% directed their attention to an adequate protein intake. Forty-eight % had received health guidance before the onset of stroke.

Cerebral vascular accidents in Japan are considered to result from a hypertension due to excessive ingestion of salt and to an unbalanced nutrition (1).

We conducted a follow-up investigation in patients with strokes, mainly in reference to health guidance before the onset of stroke.

The survey was carried out from the beginning of April to the end of March, 1976 and covered five towns and villages, Yakumo, Hikawa, Tonbara, Kashima and Tagi, all in Shimane Prefecture on the western coast of Japan. The interviews were conducted by public health nurses.

The gross mortality and prevalence rate of stroke are as shown in Table I.

TABLE I. *Patients with Stroke in Shimane Prefecture*

Town*, Village	Sex	40–49 years	50–59 years	60–69 years	Total	Prevalence rate per 1000 population	Mortality rate for 40–69 years in '71–'75 per 1000 population
Yakumo	m**	0	1	2	3	4.0	1.9
	f***	0	0	0	0	0	
	Total	0	1	2	3	1.9	
Hikawa	m	4	2	6	12	5.9	1.9
	f	0	3	6	9	3.7	
	Total	4	5	12	21	4.7	
Tonbara	m	1	2	6	9	11.3	1.8
	f	0	3	3	6	6.9	
	Total	1	5	9	15	9.0	
Kashima	m	2	3	2	7	4.7	1.8
	f	0	1	2	3	1.7	
	Total	2	4	4	10	3.1	
Tagi	m	0	3	0	3	3.8	1.7
	f	1	0	2	3	2.9	
	Total	1	3	2	6	3.4	
Total	m	7	11	16	34	5.8	
	f	1	7	13	21	3.1	
	Total	8	18	29	55	4.3	

* Population of each town and village (1975).

Yakumo 3,836 Hikawa 22,708 Tonbara 3,710 Kashima 9,162 Tagi 4,341

** male *** female

The rate of stroke was higher in the men. There was no statistical difference in the mortality for middle aged persons (40–69 years of age) on the 5 year average, from 1971 to 1975. When comparison was made of the five towns and villages as to the age-adjusted mortality rate, the values obtained were high in Tonbara, Tagi and Yakumo and low Hikawa and Kashima.

TABLE II. *Diet before the Onset of Strokes*

		Ingestion of table salt					Total
		Good*	Fair	Somewhat excess	Excess	Unknown	
Ingestion of protein source	Good**	4	2	2	2	0	10
	Fair	1	6	6	2	2	17
	Somewhat poor	0	1	5	1	2	9
	Poor	0	0	3	7	1	11
	Unknown	0	0	0	0	8	8
	Total	5	9	16	12	13	55

* Good, Fair, Somewhat excess and Excess were expressed according to a interpretation of the dietary history.

** Good, Fair, Somewhat poor and Poor were expressed by according to an interpretation of the dietary history.

Table II shows the diet ingested before the onset of stroke in 55 patients. As to ingestion of salt, 42/55 patients replied and only five (12%) were rated as “good”, in the low salt regimen. With regard to the ingestion of protein, 47/55 patients replied, and 10 (21%) were rated as “good” regarding the consumption of fish, meat and beans.

Detailed investigations were made in 22/47 patients. Only three replied, “I eat meat more than once every two days” and 14 (64%) said, “1–2 a week”. As for raw fish, 12 (55%) said, “I eat it every day”. As for salted pickles, those who ate 10 or more a day numbered 13 (59%).

Ten patients drank more than three cups of bean paste soup a day and some drank 8 cups a day. Thus, patients who ate a diet of rice+pickles+bean paste soup accounted for more than one third of the patients examined.

Only 6 (27%) gave special attention to their overall diet. Health guidance had not been given to 28 (52%) out of 54 patients. All these observations clearly indicate that health guidance should be given much more attention.

We thank the public health nurses for their co-operation throughout this study.

REFERENCE

- 1) Komachi, Y., Iida, M., Shimamoto, T., Chikayama, Y., Takahashi, H., Konishi, M., and Tominaga, S. (1971) Geographic and occupational comparisons of risk factors in cardiovascular diseases in Japan. *Jpn. Circ. J.* **35**, 189–207