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Cerebral Palsy in Y.P.A.C. (Institution for Crippled Children) Semarang

by

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Abstract

Thirty-five cases of cerebral palsy patients admitted to the Institution for Crippled Children, Semarang, have been discussed. Diagnosis was made by a team comprising an orthopedic surgeon, a neurologist, a paediatrician, and a psychologist. Treatment performed consisted of muscle relaxant, physiotherapy, and also surgery. Introduction, material and method of observation, treatment, sex distribution, classification, speech disturbance, mental status, results of treatment, and comparison with the cases in Bombay, form the sequence of this report.

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Introduction

The Institution for Crippled Children Semarang was founded on April 19, 1954. Financial resources are partly drawn from the Department of Social Affairs, and the rest from its own effort. The institution can hospitalize 25 in-patients and treat many out-patients as well. Cerebral palsy (CP) patients admitted to the Y.P.A.C. are those who need either intensive care or who cannot be regarded as out-patients. They belong either to the mild or moderate degree. Severe cases considered with little or no improvement at all are not admitted.

Problems of cerebral palsy were collected for the first time by Longman (1853) in London from the lecture given by William John Little (1843) 10 years before. Although the institution was founded some 20 years ago its activities were mainly directed to rehabilitate polio patients. Special attentions for the rehabilitation of cerebral palsies began in early May 1969, as was suggested by the late Prof. Soeharso.

Nowadays progress in immunization has caused a decrease in polio victims; on the other hand due to advances in neonatology CP cases have survived in increasing number all over the world. Some experts try to evaluate the incidence of cerebral palsy in the community. In the United States alone, Green (1968) found that 2 out of 1,000 people were suffering from CP.

Material and methods

From April 1964 to December 1973, 35 CP patients were admitted to Y.P.A.C. Semarang. Diagnosis was determined by a team consisting of an orthopedic surgeon, a neurologist, a paediatrician, and a psychologist. Treatment performed were medicine (muscle relaxant), physiotherapy, and surgery if necessary. Mental status evaluation for CP patients was as follows :

Those who had no speech disturbances, the Stanford-Binet method (form L & M) was performed. Indonesian modifications for this method had not been available yet, so the Wechsler was used instead for children between 5-15 years of age. This method had the advantage of being able to determine the IQ performance and IQ verbal separately.

The Colored Progressive Matrices were used for patients between 5½-11 years of age whereas the standard Progressive Matrices A, B, C, D, E, were for patients above 11 years of age.

Results

The results are shown in Tables 1 to 7.

TABLE 1 : *Age distribution*

A g e (years)	No. of cases
Under 1 year	1
1 to 3	6
3 to 6	6
6 to 10	12
10 to 14	10

Table 1 shows that the majority of cases came to us above the age of 6 years.

TABLE 2 : *Sex distribution*

S e x	No. of cases
S e x	18
Female	17

TABLE 3 : *Distribution according to classification of cerebral palsy.*

Sex	S p a s t i c				Athe-toid	Ataxic	Fla-coid	Rigid	Mixed
	Hemi.	Di.	Tri.	Quadr.					
Male	5	1	1	5	2	—	—	2	2
Female	7	2	—	5	—	1	—	2	—

TABLE 4 : *Number of speech affected cases*

Speech affected	20
M u t e	11
No speech affected	4

TABLE 5 : *Number of mentally affected cases*

I.Q.	Spastic	Athetoid	Ataxic	Rigid	Mixed
120+	—	—	—	—	—
110 - 119	—	—	—	—	—
90 - 109	8	—	—	—	—
85 - 89	3	—	—	—	—
70 - 84	1	—	—	—	—
55 - 69	7	1	—	1	2
40 - 54	3	1	—	—	—
0 - 39	4	—	1	3	—

TABLE 6 : *Number of congenital and acquired cases*

	S p a s t i c				Athe-toid	Ataxic	Rigid	Mixed
	Hemi.	Di.	Tri.	Quadr.				
Congenital	3	1	—	3	—	—	2	1
Acquired	5	2	1	5	2	1	2	1
Unknown	4	—	—	2	—	—	—	—

TABLE 7 : *Results of treatment*

	S p a s t i c				Athe-toid	Ataxic	Rigid	Mixed
	Hemi.	Di.	Tri.	Quadr.				
Improvement	8	2	1	7	2	1	2	1
No improvement	4	1	—	3	—	—	2	1

Discussion

Between the years 1969 - 1973, 35 Cerebral Palsy patients were admitted to the Institution for Crippled Children, Semarang. The number, however, was far below the statistical estimation which might reach about 1,000 cases or more. The small number in our cases may be due to several factors such as:

1. Lack of proper understanding of the importance of treatment.
2. Socio-economic problems; the expenses spent for transportation, drugs, brace, and other appliances.
3. Psychological factors, over-protection or rejection of the patients by the parents.
4. Attending a more developed center, e.g. Y.P.A.C. Surakarta.

Compared with the results reported by Perin Mullaferoze from the Rehabilitation of Crippled Children, Children's Orthopedic Hospital, Bombay, India, (1963 - 1970), the results are as follows :

TABLE 8 : *Percentage comparison of age group*

A g e (years)	Semarang (%)	Bombay (%)
Under 1 year	2.8	5.6
1 to 3	17.2	44.5
3 to 6	17.2	30.9
6 to 10	34.3	13.5
10 to 14	28.5	5.5

Table 8 shows that the majority of cases in Semarang were above the age of 6, but in Bombay between 1 to 6 years. This was due to the active case finding in Bombay.

TABLE 9 : *Percentage of sex distribution*

	Semarang (%)	Bombay (%)
Male	51.4	57.4
Female	49.6	42.6

Table 9 shows that the differences are small.

TABLE 10: *Percentage of cases according to classification of cerebral palsy*

	Semarang (%)	Bombay (%)
Spastic	74.3	86.0
Athetoid	5.7	2.1
Ataxic	2.9	1.0
Flaccid	—	3.7
Rigid	11.4	6.0
Mixed	5.7	0.2

Table 10 shows that spastic cases are most frequent.

TABLE 11: *Percentage of speech disturbance.*

	Semarang (%)	Bombay (%)
Speech disturbance	57.1	61.9
M u t e	31.4	5.5
No speech disturbance	11.5	32.5

Table 11 shows that mute cerebral palsy patients are present.

TABLE 12: *Percentage of mental status of spastic cerebral palsy patients*

I.Q.	Semarang (%)	Bombay (%)
130+	—	—
110 - 119	—	1.7
90 - 109	29.3	33.9
85 - 89	11.3	9.5
70 84	3.4	15.4
55 - 69	26.3	18.3
40 - 54	11.2	8.0
0 - 39	18.5	13.2

Table 12 shows the highest IQ in most cases is 109.

TABLE 13: *Percentage of results of treatment*

	Semarang (%)	Bombay (%)
Improvement	72.0	71.1
No improvement	28.0	27.9

Table 13 shows that the differences are small.

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