

A Clinical Study of 588 Rural Based Locomotor Disabled : Camp Study

RATNESH KUMAR¹, A. K. BAJPAYEE², A. K. AGARWAL³

District Rehabilitation Centre, Sitapur

Deptt. of Physical Medicine & Rehab. K. G.'s Medical College, Lucknow

Disabled camps were organised in ten rural blocks of Sitapur, Uttar Pradesh to provide the modern rehabilitation services. 588 Locomotor handicapped were evaluated in detail. Males were four times more than the females. Two third of disabled seen were below 17 years of age. Polio affected disabled were maximum (407) besides, followed by spastic (66) and amputees (37). Out of 407 polio cases, 224 were having contracture of one or more joint and 147 cases were found suitable for orthosis. The reconstructive surgery was advised in 175 cases prior to fitment of orthosis/prosthesis.

INTRODUCTION

More than 53 lacs people of our country are having locomotor disability (National Census, 1981) and thus represent 38.4% of total disabled. 42.4 lacs of locomotor handicapped (80%) are residing in rural India, where rehabilitation services are negligible. Recently a concept of community based comprehensive rehabilitation for disabled at door step has been developed.

Since the district level infrastructure is still in phase of development, the only method available, is to mobilise, expertise to rural areas through the camp approach. With this philosophy in mind, rural camps in ten different blocks were organised in the last two years through District Rehabilitation Centre (DRC), Sitapur. It was aimed to study incidence and clinical picture of locomotor disabled in rural areas, to find out material/management need and to have base line data for development of need based rehabilitation services.

¹Medical Officer (Rehab.)

²Project Officer

³Senior Medical Officer cum Reader

MATERIAL AND METHOD

Ten screening camps were organised in ten different rural blocks of district Sitapur of Uttar Pradesh (India). They were arranged on prefixed date and location (arranged at Central and approachable location of the block). Local resource, manpower and pamphlet were used to dissipate the information about scheduled date and location of camp. All types of locomotor disability irrespective of cause, age and sex were included in the study.

To collect various biosocial details, a standard pretested schedule was used. Their detailed evaluation of disability was done. The measurements were arranged for orthosis and prosthesis on the spot.

OBSERVATION

A total of 588 locomotor disabled attended those 10 camps during the period of March, 1986 to March, 1988.

The cases were aged from one year to seventy years as shown in Table No. I. The maximum No. of cases were in the first decade of life (49.5%) followed by cases between 11-17

Table I. Distribution of study population in relation to age and sex

Sex/ Age (Yrs.)	0-5	6-10	11-17	18-35	36+	Total
Male	85 (18)	139 (29.6)	95 (20.2)	106 (22.6)	45 (9.6)	470 (79.9)
Female	28 (23.7)	39 (33.1)	28 (23.7)	15 (12.7)	8 (6.8)	118 (20.1)
Total	133 (19.2)	178 (30.3)	123 (20.9)	121 (20.6)	53 (9)	588 (100)

years. Disability among males (79.9%) was four times higher as compared to females (20.1%). In the age groups below 17 years the male/female distribution was 4:1 while in the upper age group (17+) the prevalence was six times higher among males.

Among paralytic disability—Poliomyelitis (407) was found to be commonest (69.2%) followed by spastic cases (11.2%), which included hemiparesis (stroke), paraparesis and cerebral palsy etc.

In childhood disability, Poliomyelitis was maximum, followed by cerebral palsy (34) in number. Four cases of post injection radial nerve palsy were also seen. Amongst 41 cases (7%), 37 were of amputation and 4 were of congenital limb deficiency. 21 out of 31 cases of congenital deformity group were of talipes equinovarus. None of the female reported with limb deficiency or amputation.

The distribution of amputee cases in relation to age and sex was shown in the table No. II. All the cases, except two were having single extremity involvement. 29 cases (67.4%) were aged above 18 years against 14 cases (32.6%) below 18 years of age.

Table II. Distribution of cases in relation to etiology

Sex/Type	Male		Female		Total	
	No.	%	No.	%	No.	%
Poliomyelitis	313	76.9	94	23.1	407	69.2
Amputee	37	100	—	—	37	6.3
Spastic	55	83.3	11	16.7	66	11.2
Ankylosis	21	84.0	4	16.0	25	4.3
Cong. deformity	24	77.4	7	22.6	31	5.3
Miscellaneous	20	90.9	2	9.1	22	3.7
Total	470		118		588	100.0

Among upper extremity amputees, right and left were equally affected (10 and 12 respectively). Left above elbow amputees were three times more as compared to right sided one. Whereas right sided below elbow amputees were two times more to the left sided below amputees. There were 17 cases of below knee amputation against only 4 cases of above knee amputation (Table No. III/IV).

The distribution of 407 Poliomyelitis cases shown in the Table No. V. Five cases having more than one extremity involvement have been included twice thus making, a total of 412.

Table III. Distribution of amputees/congenital deficiency cases in relation to anatomical level and age

Anatomical level/Age	0-5	6-10	11-17	18-35	36+	Total
Upper Extremity (51.2%)						
Above Elbow	—	1	1	4	3	9
Below Elbow	1	2	4	5	1	13
Lower Extremity (48.8%)						
Above Knee	—	—	1	2	1	4
Below Knee	—	1	3	6	7	17
Total	1	4	9	17	12	43

It includes cases of congenital limb deficiency. Two cases were having more than one limb involved.

Table IV. Distribution of amputee cases—Anatomical level in relation to side affected

Anatomical level/ Side	Right		Left		Total	
	No.	%	No.	%	No.	%
Upper Extremity						
Above Elbow	2	22.2	7	77.6	9	20.9
Below Elbow	8	61.5	5	38.5	13	30.2
Lower Extremity						
Above Knee	1	25.0	3	75.0	4	9.3
Below Knee	10	58.8	7	41.2	17	39.5
Total	21		22		43	100.0

Table V. Distribution of Poliomyelitis cases in relation to age, sex and extremity affected

Anatomical part/ Age (sex)	0-10		11-17		18 & above		Total	
	M	F	M	F	M	F	M	F
Upper Extremity								
Right	4	1	3	1	1	—	8	1
Left	2	2	1	1	—	—	3	3
Lower Extremity								
Right	57	18	21	4	19	—	97	22
Left	66	25	27	6	15	2	110	33
Bilateral	65	23	21	9	12	5	98	37
Total	196	69	73	20	47	7	316	96

Above Table includes cases, one of bilateral upper extremity, two each of one upper and bilateral lower and one upper and one lower extremity.

Cases were aged from one to forty nine years. Upper extremity involvement was in 3.4 percent only. Out of 393 lower limb involved cases, unilateral and bilateral involvement were in 262 and 135 cases respectively. Right and left lower extremities were affected in 119 and 143 respectively.

Out of 407 polio cases, 224(38.1%) were having soft tissue contractures and deformities. The hip, knee and ankle joints were deformed in 159, 112 and 146 cases respectively. Unilateral hip joint contracture deformity was

commonest (90). The contracture was more common in the cases aged above 6 years.

Table VI. Material/Management need of disabled

Management/ Type	Para- lytic	Amp- utee	Anky- losis	Neuro- logical	Other	Total
Orthosis	138	—	—	4	5	147
Prosthesis (Ortho/ modified shoe)	9	34	2	1	9	55
Reconstructive surgery	152	2	2	1	18	175
Mobility Aids (Axi. Cr./Tricycle Wheelchair)	50	5	11	8	9	83
Physio/Occupa- tional Therapy	55	—	6	30	34	125

Out of the management planned, only first and foremost has been presented in the Table. If a case was advised both orthosis and crutches, then he has been shown here in the column of orthosis only. 147 cases were found suitable for orthosis measurement. Out of 41 amputees 34 were found suitable for prosthetic measurement. 175 cases (29.8%) were subjected for reconstructive surgery prior to fitment. 125 cases including 55 polio cases were provided with different modalities of treatment of Physical Medicine.

DISCUSSION

In the present study, incidence of polio and amputee are 69.2 and 6.7 percent respectively against the observation of Agarwal & Goel who have conducted similar camps at Meerut in 1978. They have reported lower number of polio cases (33.5%) and higher number of amputees (49.3%). The reasons may be due to socio-geographical variation and due to rapid mechanisation in agriculture in western Uttar Pradesh. Our observation of four times higher incidence of disability in males is practically similar to Agarwal & Goel (1978). The

maximum number of amputees were in the age group 18-35 years, due to more activity and exposure in this phase.

Three to four times higher incidence of poliomyelitis in males can be explained by psycho-social factors in our society. In our male conscious society, sons in preparalytic stage are given heavy massage, frequent injection and more manipulation by village quacks thus giving more harm to the male child.

Lower extremity was affected 26 times more than the upper extremity by polio. Observation is significant and similar to other studies of Punatar et al. (1977) & Sanchetti et al. (1983). The higher prevalence among early age group supports to the established fact that poliomyelitis is a disease of early childhood. In our study more involvement of dorsiflexors and inverters of ankle were found similar to others like Punatar et al. (1977), Mercer et al. (1978) and Kush Kumar et al. (1988).

We have noticed that in more than fifty

percent of poliomyelitis cases, there was soft tissue contracture and deformity.

Hence only 34% polio cases were found suitable for orthosis against the observation of 47.3% by Agarwal & Goel (1978).

A serious thought must be given to achieve success in rural area.

In view of above observations, we recommend the following :—

- Community awareness and their participation in Rehabilitation programme should be encouraged.
- Preventive aspect besides early intervention should be stressed through primary health care delivery system.
- Medical and reconstructive surgical services need to be equally stressed in 'comprehensive rehabilitation services for the disabled'.
- The non government organisations (NGO) should come forward to participate in the rural disabled camps.

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