

THE FEMALE PARAPLEGIC IN SPAIN: PRELIMINARY REPORT

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Summary. A survey has been made of 70 out of the 166 female paraplegic and tetraplegic patients treated at the Spinal Unit of La Fe Hospital of Valencia in order to record the aetiology, main medical problems, domestic resettlement, functional, social and industrial rehabilitation of the patients. The results are discussed.

Key words: Female paraplegic patients; Cultural considerations; Spain.

Introduction

OUR AIM in this paper has been to assess female paraplegic patients treated in the Spinal Unit of the La Fe Hospital at Valencia, and to investigate their main problems and the degree of rehabilitation achieved.

The anatomical, physiological, social, professional and cultural differences between the sexes may undoubtedly influence the aetiology and the prognosis of the lesion; and the functional, social and industrial rehabilitation of female patients compared with males. Although the number of women with spinal injuries is increasing steadily, we have found very few special references in the literature regarding this aspect. Furthermore, the final result of rehabilitation is much influenced by the cultural characteristics of the female in a particular country. No previous studies have been carried out in Spain.

Material and Method

We have reviewed 166 female paraplegics out of the 586 patients treated at the Spinal Unit of the La Fe Hospital at Valencia from the time of its opening in October 1969, to December 1981.

The male/female ratio is 2.5:1 which is much lower than the ratio found by other authors in several other countries, where reference was made only to traumatic cases (Gehrig and Michaelis, in Switzerland 1968; Frankel *et al.*, in England 1969; Key and Retief, in South Africa 1970; Sutton, in Australia 1973 and Minaire *et al.*, in France 1978), but similar to our findings in a previous survey (Forner *et al.*, 1976) and those obtained by other Spanish authors (Aguilar *et al.*, 1974 and Roldan *et al.*, 1974) (Table I).

At the time of our study 23 patients had died, 60 were over 70 years of age and 13 patients could not be traced or refused to be interviewed. (All of these patients were discarded from further study.)

Therefore the investigation was only completed in the remaining 70

TABLE I
Male-female ratio

Author	Date	Country	Ratio
Gehrig & Michaelis	1968	Switzerland	4.9
Frankel <i>et al.</i>	1969	England	8.6
Key & Retief	1970	South Africa	8.3
Sutton	1973	Australia	6.8
Aguilar <i>et al.</i>	1974	Spain	3.0
Roldan <i>et al.</i>	1974	Spain	2.3
Forner <i>et al.</i>	1976	Spain	2.1
Minaire <i>et al.</i>	1978	France	3.7
Present study	1982	Spain	2.5

cases. All these patients were interviewed personally by a doctor and a psychologist either in the hospital during a medical check-up or at home, according to a questionnaire in which these aspects were taken into account: aetiology, level and degree of lesion, medical complications, marital status, sexual activity, children, educational level, functional rehabilitation and professional and social rehabilitation.

The medical records were also checked and close relatives were interviewed in many instances to clear up certain points. Sixty per cent of our patients, mostly living in small towns and with low educational levels refused to attend our hospital for regular check-ups.

Although it is difficult to discharge our patients home, they do not wish to return to the hospital unless there is a major complication that cannot be dealt with by the general practitioner.

Results and Discussion

1. Age (Table II)

Even disregarding the 60 patients who were over 70 years of age the proportion of older patients is high, probably due to the high percentage of non-traumatic cases.

TABLE II
Age groups

Years	Traumatic	Non-traumatic	No. patients
0-15	1	0	1
15-20	3	4	7
20-30	9	8	17
30-40	5	5	10
40-50	7	3	10
50-60	4	5	9
60-70	4	12	16

2. *Aetiology* (Table III).

Almost half of our patients had non-traumatic paraplegia because our Unit is attached to a General Hospital with important neurological and neuro-surgical departments which send us patients with 'medical' paraplegia, and some who have had a spinal neoplasm, and who are likely to benefit from rehabilitation.

TABLE III

Aetiology	Cases	Per cent
<i>Traumatic</i>	36	51.4
Traffic	25	
Work	2	
Domestic	9	
<i>Non-traumatic</i>	34	48.6
Neoplastic	10	
Inflammatory	9	
Vascular	5	
Degenerative	4	
Other	6	

3. *Level and degree of the lesion* (Table IV).

More than half of our patients (67.2 per cent) had incomplete lesions, probably due to the high number of non-traumatic cases, who usually have a partial spinal neural lesion.

If we compare what happens with our male patients there is a higher proportion of traumatic cases (Table V).

TABLE IV
Level and degree of neurological lesion

Level	Incomplete	Complete	Total	Per cent
C	15	3	18	25.7
T1-6	12	12	24	34.3
T7-12	3	4	7	10
L-S	17	4	21	30
Total	47 (67.2 per cent)	23 (32.8 per cent)		

TABLE V
Aetiology and sex of patient

	Male	Female
Traumatic	72 per cent	51.4 per cent
Non-traumatic	28 per cent	48.6 per cent

4. Educational level (Table VI).

This is low and there is a high incidence of illiterate patients (24 per cent). It is in keeping with our previous study (Forner *et al.*, 1976), in which we found 74.2 per cent of patients with a low level of education. It is interesting that in a study carried out by Carabias *et al.* (1973) it was found that 24 per cent of patients had a border line Intelligence Quotient and a 24 per cent were 'oligophrenics' in a low I.Q. and low cultural level.

TABLE VI
Educational level

Illiterate	17 (24.3 per cent)
Low	26 (37.2 per cent)
Average	21 (30 per cent)
High	6 (8.5 per cent)

5. Complications (Table VII).

Only 18 patients had a urinary tract infection more than twice a year in spite of the fact that 34 had infected urine. No patient had renal failure. It appears that female paraplegic patients have a lower rate of upper urinary tract infections than males in spite of the high rate of positive urine cultures.

Except in two cases the pressure sores were small but they were very difficult to heal and tended to recur. They were treated by the general practitioner.

TABLE VII
Complications

A) Bladder infection + 4 year	34 48.6 per cent
B) Pyelonephritis + 2 year	18 25.7 per cent
C) Hydronephrosis	3 4.3 per cent
D) Renal stones	4 5.7 per cent
E) Bladder stones	2 2.8 per cent
F) Bladder incontinence	50 71.4 per cent
G) Pressure sores	14 20.0 pre cent

6. Management of bladder incontinence.

Periodic voiding was only possible in nine patients, all of whom had partial lesions and a degree of sphincter control. Nine patients required an indwelling urethral catheter, and 32 patients relied on absorbent pads.

7. The marital status.

Table VIII shows the marital status at the time of the investigation. Only three patients each with a very incomplete lesion married after the spinal paralysis occurred. One patient had already separated from her husband

prior to developing paraplegia. Therefore, no change in the official marital status could be attributed to the spinal lesion. Nevertheless, many wives attributed the unfaithfulness of their husbands to their physical disability and lack of sphincter control.

TABLE VIII
Marital status

A) Single	24
B) Married	34
C) Widowed	10
D) Separated	1
E) Single with partner	1

8. *Sexual intercourse* (Table IX).

Eleven patients had completely discontinued intercourse after the lesion but in only four could the cause be attributed directly to the spinal lesion. Nevertheless in 14 patients sexual intercourse was sporadic (less than twice a year), due to lack of interest of the sexual partner or fear that it could adversely affect health (Table X).

TABLE IX
Sexual intercourse

A) Before lesion	44
B) Regular after lesion	19
C) Seldom after lesion	14
D) Never after lesion	11
E) Only after lesion	

TABLE X
Cause of interruption of sexual
intercourse

A) Death of partner	7
B) Fear of worsening health	2
C) Fear of pregnancy	1
D) Refused by partner	1

9. *Children*.

Five patients had children after the development of the spinal injury (the lesion being complete thoracic in two and incomplete cervical in three). Except in one patient all married patients who had had no children before the spinal lesion wished to have them afterwards. Probably in some cases this was a way to keep the family closer. Thirty-six patients had had children before they became paraplegic.

10. *Functional rehabilitation* (Table XI).

More than half of our patients are not entirely independent for the Activities of Daily Living, mainly on account of difficulties in wheelchair transfer, and almost half of them cannot get outdoors by themselves. Although 55 of our patients had had some minor modifications to their houses to get to the toilet, the kitchen or to their rooms, the major architectural barriers had not been removed.

We must also consider the great variety of architectural barriers found in the street, and in most private and public buildings.

TABLE XI
Degree of independence

A) Independent A.D.L.	32
B) Dependent	38
—Feeding	8
—Dressing	15
—Toilet	16
—Wheelchair transfer	35
—Getting outdoors	33

11. *Locomotion*.

Regarding locomotion only 28 incomplete patients could ambulate independently or with the aid of walking appliances, crutches or both.

All patients with complete lesions were wheelchair bound or were bed-ridden. Few female patients practised regular standing and walking exercises between parallel bars to maintain fitness.

12. *Domestic resettlement*.

The great majority of our patients went to live with their families and only one patient required a hostel (minimal care hospital).

Two patients lived alone and they had incomplete lesions with good neurological recovery.

13. *Employment* (Table XII).

The number of patients employed was low (14.3 per cent) but it was also low before the lesion as in Spain, except in the big towns, most people do not have a job with a regular salary but carry out household activities or help in the family business.

TABLE XII
Employment

A) Before lesion	17
B) After lesion	10
C) Loss of employment after lesion	13
D) Obtained job after lesion	6

Thirteen patients previously employed in unskilled work lost their job after the lesion due to inability to continue.

Only six patients obtained a job after lesion, three as teachers, one in clerical work and two in unskilled employment.

14. Income (Table XIII).

The family income of our patients was low, in some instances it was at starvation level.

TABLE XIII
Income

Per month	
Below 200 dollars	14
200-400 dollars	25
400-600 dollars	15
600-800 dollars	7
800-1000 dollars	9

15. Sources of income (Table XIV).

Most of the patients were living at their families expense as only 10 could earn a salary and only 13 patients obtained a pension due to the accident.

TABLE XIV
Sources of income

A) Salary	10
B) Familial salary	37
C) Pension	13
D) Familial pension	10
E) Two or more sources	16

Conclusions

1. More than half of our patients (60 per cent) did not attend the hospital for regular check-ups in spite of instructions to do so. Minor ailments are treated by their general practitioner.
2. Almost half of our paraplegic female patients had non-traumatic lesions, and 67.2 per cent had incomplete lesions.
3. The educational level is low, mainly in older people with 24.3 per cent of illiteracy.
4. The spinal lesion does not alter the official marital status although personal relationship may be deeply altered and sexual intercourse is diminished but is rarely discontinued.
5. The wish to have children may be a way to maintain family links.
6. Functional rehabilitation is poor and most of our patients remained at home doing only minor domestic activities. Only two could drive

a car. Apart from watching television and participating in some other recreational activity at home, very few went out, and few practised any kind of sport or went walking.

7. The rate of employment is low but it is also low in the general female population.
8. Family resettlement was very good and all did their best to accommodate the disabled member of the family at home.
9. Only 10 could earn a salary, but 13 obtained a pension after the accident; in most cases the income was so low that we wonder how it was possible to live with any comfort.

RÉSUMÉ

On a réalisé un revision de 70 femmes paraplégiques et tetraplégiques parmi les 166 qu'on a été traités dans l'Unité de Paraplégiques de l'Hôpital 'La Fe' de Valencia (Espagne), pour connaître et rechercher l'étiologie les principaux problèmes médicaux et la Réhabilitation familial, social et professionnel.

On discute les résultats.

ZUSAMMENFASSUNG

Ein Überblick von 70 Frauen mit Paraplegie und Tetraplegie von unter den 166 behandelten Frauen in der Paraplegie Abteilung des 'La Fe'—Spitals in Valencia ist durchgeführt worden. Zweck dieser Revision wurde eine nähere Einsicht in die Kenntnisse und die Etiologie, sowie das Erfahren der wichtigsten ärztliche. Probleme und der familiären gesellschaftliche, berufliche Rehabilitation zu untersuchen.

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