Paraplegia

China's First Total Care Unit for the Spinal Cord Injured

D. Wang,* X. Wu, G. Shi, Y. Wang

China Rehabilitation Research Centre, Beijing, China.

Summary

Before discussing China's first total care unit for the spinal cord injured, it is important, though difficult due to lack of an epidemiological study, to give the incidence of spinal cord injury in China. The only seriously conducted study of this kind was that from the Beijing Area (Spinal Cord Injury Investigating Group in Beijing, 1988). Some of the results will be presented below.

Key words: *Spinal cord injuries; China; Total care unit.*

Material and results

In the Beijing epidemiological study, the subjects were all permanent residents of Beijing. Temporary visitors were excluded. This retrospective study covered the 5-year period from 1982 to 1986. The incidence of injury was 6.7 per million population, which is much lower than that of Western countries (Burk and Toscano, 1987; Madersbacher, 1987). The main cause of injury was a fall (36%); motor vehicle accidents are less common than in Western countries constituting less than 10%. The site where the accidents occurred were far beyond the reach of organised emergency services; and only less than 5% of the accidents were managed by the Municipal Emergency Centre, where there was no special knowledge, skills and equipment for patients with a spinal cord injury. The average time interval from accident to admission was 22 hours. Twenty three per cent of cases had an aggravation of the injury during transportation. The injury was complete in 51%, and incomplete in 49% at admission. The level of injury of the spine was cervical in 51%, thoracic in 19%, thoracolumbar in 18% of cases, while the remaining 12% was lumbar.

Due to lack of enthusiasm, knowledge, skills, manpower and other resources,

treatment was mainly surgical and bedrest. Nursing care was far from satisfactory and various preventable complications developed. Urinary tract infection occurred in 100% of cases, and pressure sores developed in more than 30% of cases. There was factually no rehabilitation or extended care. The victims were asked to go home or to a nursing home after the surgical wound had healed. Only exceptional paraplegics were fortunate enough to go back to the community. In addition to clinical services, some research projects are under way, but so far do not bring about much significant practical benefit.

Sir George Bedbrook (1987) summarised the development of the care of spinal cord paralysis timewise as follows:

Spinal man	Past	Pre-Guttmann
		Guttmann
		Post-Guttmann
	Present	Comprehensive unit
		Extended care
	Future	Prevention Fundamental research

The demarcation line between the 'Past' and 'Present' is if there is a comprehensive unit or units. As there was no such unit in China until January 1987 when the first one was established, it could be considered that China is in its very early period of the second stage of development.

Late in 1983, a decision was made by the Preparatory Group of China Fund for the Handicapped, headed by Mr Pufang Deng, to establish China's first modern rehabilitation centre in Beijing. The centre is expected to be completed for service late in 1988, and will focus its attention on spinal cord injury. To gain experience in providing total care and running a comprehensive unit, a pilot unit was set up in January 1987 in a medium-sized hospital. The unit was equipped with 25 beds, and staffed with all necessary professionals including surgeons, physicians, nurses, physiotherapists, occupational therapists, psychologists, social workers etc. The results were encouraging. Patients could be up in wheelchairs 2 to 4 weeks after spinal instrumentation for thoracolumbar cases and walked with braces in 3 to 4 months after surgery. For cervical cases patients could be up a few days after anterior surgery if their general condition permitted this. Their independency depended upon the completeness of the injury. Two patients with a C4 injury survived respiratory insufficiency and infection, but they would have otherwise succumbed in non-specialised units. Pressure sores were eliminated, but urinary tract infection remained a difficult problem and the incidence was as high as 100%. Regretfully, the society was not ready to accept those victims who became more or less independent after rehabilitation in the Unit. Tremendous work has to be done along these lines.

Discussion

The question if the establishment of comprehensive units in China is practical and economically cost-effective remains open. The results of China's first total care unit for the spinal cord injured answer the question positively.

Some unofficial statistics have shown that the average annual cost for the care of a paraplegic after discharge from the acute care hospital was 5000 yuan RMB in Beijing and 15 000 yuan RMB in some industries. The average hospital charge for a thoracolumbar patient in the pilot unit of China Rehabilitation Research Centre was 6000 yuan RMB and for a cervical patient 10 000 yuan RMB. The charges were relatively high in comparison with those of general orthopaedic or neurosurgical departments, where SCI patients had only a short stay. The paraplegics discharged from the pilot unit, however, were independent and might have led productive lives if society had been ready to accept them, and then the cost of 5000 to 15 000 yuan RMB for posthospital care could have been much reduced or saved annually. Taking 10 000 as the average, an annual national saving of 1.0 billion could be achieved with the estimation of 100 000 paraplegics nationwide. This figure amounts to about 1/6 of the total input of the Government health care. Therefore, the establishment of such comprehensive units is cost-effective. It is of paramount importance, though difficult, to convince the administration and medical and other professionals to develop comprehensive care and social employment in the first place to reduce the cost of care. Only then, will there be more financial resources to be used for other health purposes and researches of more academic interest than practical benefits.

Conclusions

The authors would like to conclude with a quotation from Dr S. L. Stover (1987):

‘A balance of high and simple technology must be maintained.’

‘Hope for a cure is not unreasonable, however, the reality of that hope must be clarified. In the meantime, rehabilitation has an important role to play. Let’s not forget that hope for the spinal cord injured person can also be given through genuine concern, good medical care, and assistance in meeting daily needs.’

‘Fragmentation of care can be compared to a fracture with nonunion; the outcome is unacceptable.’

These statements are particularly true for China, a country with a tremendous population and needs, but with limited resources.

References

- BEDBROOK GM 1987 The development and care of spinal cord paralysis (1918–1986). *Paraplegia* 25:172–184.
- BEIJING SCI Epidemiological investigating group in Beijing 1988 A five-year reviewing survey for SCI in Beijing. *Chinese Journal of Rehabilitation* 3:59–62.
- BURK DC, TOSCANO J 1987 Incidence of spinal cord injury. *Menzies Foundation Technical Report* 1:13–47.
- MADERSBACHER H 1987 A comparison between Australian and some European data. *Menzies Foundation Technical Report* 1:48–51.
- STOVER SL, FINE PR 1987 The epidemiology and economics of spinal cord injury. *Paraplegia* 25:225–228.