THE RESEARCH OF STANDARD REHABILITATION PROTOCOLS FOR CEREBRAL VASCULAR DISEASES, A PROGRAM FUNDED BY THE "11TH NATIONAL 5-YEAR PROJECT" CHINESE REHABILITATION RESEARCH CENTER (CRRC)

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Objects: CRRC cooperated with neurological departments and rehabilitation departments from 18 hospitals to establish the standard rehabilitation protocols for cerebral vascular diseases. The program included: A. exploring evaluation and classification standards of the disability status in stroke patients and establishing the database. B. establishing the standard rehabilitation protocols for CVD inpatients.

Methods: totally, 2250 stroke patients were included in this study.

The baseline clinical information, ICF data and data from correlated scales were collected from 1020 of2250 CVD patients and recorded in CVD ICF database, based on which the disability status of CVD patients were evaluated and common scales were compared with ICF scales.

590 of 2250 CVD patients were recruited in the study of the optimal starting time for CVD rehabilitation. Patients in this study were divided into 3 groups, and rehabilitation was offered at 2nd, 5th, 8th day respectively after the stable clinical status of these patients was confirmed. Comprehensive evaluations were made before and 4 weeks after rehabilitation to screen the optimal starting time.

640 of 2250 CVD patients were divided into 3 groups and rehabilitations with different intensities (rehabilitation lasts 90 minutes or 135 minutes or 180 minutes) were given. After 4-week rehabilitation, the functional improvements of patients in 3 groups were compared to find the optimal rehabilitation intensity.

Results: positive correlations were found between CVD patients' functional disorder levels in ICF (B) and Fugl-Meyer scores ($P < 0.05$). Life and participation levels (D) and Bathel index were positively correlated with WHODAS ($P < 0.05$).Positive correlations were not found between ICF environment elements (E) and functional disorder levels (B) ($P > 0.05$). But there were positive correlations between ICF environment elements and life and participation levels (D) ($P < 0.05$), which indicates the influences of environmental elements on ADL and social participation ability of CVD patents.

One-month rehabilitation offered 2, 5, 8 days post stable clinical status could significantly improved NIHSS score, Bathel score and Fugl-Meyer score in motor and balance function ($P < 0.05$). No differences were found in scores of these scales between groups after one month treatment ($P > 0.05$).

The rehabilitations with intensity of 90min, 135min and 180min could significantly improve performance of CVD patients in NIHSS score, Bathel score and Fugl-Meyer score in motor and balance function after one-month training. After one-month training, the scores of Fugl-Meyer in 135min and 180min group were significantly different with those in 90min group ($P < 0.01$). There were significant differences between 180min group and 90min group in NIHSS scores ($P < 0.05$). No significant differences were found between 135min group and 180min group in all scales ($P > 0.05$).

Conclusion: ICF database could be used to evaluate functional disorder, life and participation ability and the influences of environment in CVD patients. Rehabilitations could be offered within 8 days after the stable clinical status of CVD patients is reached. Compared with 90-minute rehabilitation, 135-minute rehabilitation a day seemed more promising in motor function recovery during first month ($P < 0.01$). But 180-minute rehabilitation brings no better motor function recovery than 135-minute rehabilitation after one month training. 135-minute rehabilitation a day should be recommended in CVD patients.