Effect of a specific nursing protocol on the clinical outcome in acute stroke patients

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ABSTRACT

Background of the study

One of the most significant issues in care of stroke patients is their nutrition. Malnutrition has been reported as a common problem post stroke. Nutritional aspects of care in patients with arterial stroke have been addressed well and many protocols and guidelines for their specific needs are available. Venous stroke being not very common, it has not received adequate attention. Moreover venous stroke is different from arterial stroke in the course of illness and underlying pathology. Hence the researcher as a nurse undertook the present study to test the effect of nutrition related nursing protocol on the clinical outcome in patients with acute venous stroke.

Methods

A quasi experimental approach using the control group time series design was used for the study. A total of 100 subjects, 50 in the control and 50 on the experimental group constituted the sample. The data collection for the control group subjects was completed and later the subjects were recruited in the experimental group. In both the groups the initial baseline assessment was done on admission which included the baseline demographic and clinical profile and the baseline outcome measures which include anthropometric outcome, biochemical outcome and stroke outcome. Subsequently, in the experimental group the intervention according to the nursing protocol was implemented. The nursing protocol focuses primarily on assessment of the nutritional status of the patients and providing diet counseling regarding augmented oral feeding so as to meet the calorie protein and fluid requirements of the patient. In both control and experimental groups the anthropometric outcome measures were measured on every 5th day till 15th day of admission or till discharge whichever was earlier. The biochemical and stroke outcome measures were measured at discharge. The stroke
outcome measures were measured again at one month telephonically. The data were compiled and analyzed through descriptive and inferential statistics.

Results

Low serum protein (B -4.3) and low serum albumin (B -4.8) were predictive of poor outcome. More calories received during admission was predictive of good outcome (B -1.3) and it was a protective factor against the degree of disability at discharge (OR0.33). More number of days fed on nasogastric tube was predictive of high degree of disability (OR1.8). Low serum albumin, low serum protein and lesser calories received during admission were predictive of high reduction in anthropometric indices.

The nursing protocol leads to significant improvement in calorie, protein and volume intake in the venous stroke patients (p<0.001). There was a trend in improvement of the anthropometric outcome measures in the experimental group, but it was statistically insignificant. The groups did not differ in their biochemical or stroke outcome measures at discharge or at one month.

Severity of stroke was found to be significantly high in older subjects (p=0.01). Subjects with higher severity of stroke had higher duration of hospital stay (p<0.001) and higher degree of disability (p<0.00). Subjects who had higher severity of stroke were taken care by spouse /children than subjects who had a lesser severe stroke (p<0.01). Subjects who had undergone surgery were completely dependent at one month than the subjects who had not undergone surgery (p=0.012)

Conclusion

The study concluded that low serum albumin and low serum protein and lesser intake of calories during the acute phase are independent predictors of poor outcome in acute venous stroke patients. The nutrition protocol shows a trend in improving the anthropometric measures but does not influence the stroke outcome measures. The nursing protocol leads to significant improvement in calorie, protein and volume intake in the venous stroke patients. Nurses need to be aware of the predictive factors for poor outcome in venous stroke patients, so that they can anticipate and do corrective measures to prevent further deterioration in these patients. Diet counseling and individualized nutrition care in patients can lead to improved intake.