ABSTRACT

Assessments and interventions were performed aimed at improving eating in stroke patients. Eating and functions of importance for eating were assessed in 30 patients with acute stroke and localised brain damage and 15 healthy elderly (**I**). The eating performance of another five patients was described in detail (**II**) and these patients and another 10 patients were included in an intervention study (n=15) (**III**). Eleven of those 15 participants were selected for a pilot study (**IV**) using the model of QALYs for estimation of cost-effectiveness. This analysis indicated a need to further discuss ethical aspects underpinning the QALY-model (**V**) related to nursing care.

Direct observation and/or video recording of test-meals/ordinary meals was carried out, and there were dialogues with the patients and some accompanying family members about eating. The most common eating difficulties were handling of food on the plate, handling of food in the mouth and swallowing. The patients expressed fear, insecurity, shame and isolation in the eating situation. It was not possible to make predictions from the oral functional tests about specific difficulties in eating.

The main measures during the interventions were adjusting the patients' sitting position, adjusting the consistency of drinks and food, and training various compensatory swallowing techniques. Stimulation in the mouth was of great importance for tube-fed patients in making the initiation of swallowing possible. The adjustments of the drinks and consistency of food for the patients with oral feeding led to a dramatic change in amount of coughing, time for eating as well as quantity of food received. After the training the 10 patients with tube feeding could swallow liquids or small amounts of food in a safe way and four of them could eat orally.

The cost-effectiveness of the assessment and treatment developed was tested in a pilot-study using the QALY-model. The findings showed that it is possible to apply this health-economic method to analyse post-stroke eating training which is considered to be a specific nursing care intervention. The analysis concerning costs, savings/health gains showed that eating training following stroke among these patients is a highly cost-effective intervention.

Economic analysis should not guide priority-setting, but it is recommended by the Swedish Government Bill as one of three ethical principles for guiding resource allocation. As new methods developed and insights gained in research are of increasing significance in health care, the question is which services and methods are to be implemented. If eating training after stroke is to be implemented it must be given priority in relation to other measures. The estimation of cost-effectiveness must however be made by means of a method which in its ethical foundation is in line with nursing ethics. The QALY-model is based on the idea of health maximisation, and health in the model is interpreted as absence of disease which is not in line with ethics in nursing care. A new method developed by economists called EQALY, based on a balance between a patient's initial severity of disease (needs) and treatment effect is closer to the distribution rule applied in specific nursing care.

In conclusion, the present study has shown that eating difficulties after stroke need to be managed by broad assessments and individual interventions developed in a close dialogue with patients and families. The personal experiences of deficits during mealtime are closely related to not being able to participate in 'social eating'. The post-stroke eating training program was shown to be cost-effective since the savings by far exceeded the costs. The ethics underpinning EQALYs are closer to the ethics of nursing care than are those underpinning the QALY-model.

Key words: Stroke, eating training, dysphagia, assessment, intervention, health economy, cost-effectiveness, QALY, EQALY