Special Article – Stroke Rehabilitation

Don`t Think about Pink Elephants

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Short Communication

In the therapy of spasticity, it is a major challenge for the field to define parameters that measure therapeutic success well. We often use the MAS (Modified Ashworth Scale), the Spasticity Angle (Tardieu Scale), the PGA (Physician Global Assessment), the Disability Assessment Scale but, of course, questionnaires on the quality of life are used as well [1].

Regrettably, despite subjectively good therapeutic results, the employed scales do not reflect this success. In recent years, an attempt has been made to define goals in close cooperation with the patient in order to have an additional clinically relevant parameter that reflects therapeutic success. Specifically, Goal Attainment Scaling has proved itself an instrument that serves to individually verify the achievement of self-imposed goals [2-4]. Goal Attainment Scaling requires the definition of one or more objectives and indicators that confirm the achievement of the objectives. These indicators are converted into a five- or six-level scale, in which the patient is asked to compare the expected result with the actual therapy outcome. In case of a five-point scale, this would provide response categories from "much more than expected" and "more than expected" to "as expected", "less than expected" and "much less than expected" (Table 1). The goals to be defined should fulfill certain criteria, for which the S.M.A.R.T. goals have proven successful. SMART stands for Specific, Measurable, Attainable, Realistic, Timely; defining such goals is conducted taking into account the patient's history, the current status of the therapy and of course a foreseeable period of time. It is important that these goals are realistic, i.e., not too demanding, but also not too trivial, that they are rather realistic, and that there are no gaps or overlaps between set goals, that they are differentiated enough, and do not involve multiple variables and that they are agreed with the patient and/or caregiver. Goals that are important to the patient and/or their family are more likely to be achieved. Regrettably, however, despite diligent preparation and training in the application of the Goal Attainment Scale, studies fail to show goal achievement and can only provide negative findings [5]. A current example is the so-called REFLEX study [6], in which therapy goals were defined and investigated with great effort: despite these efforts, regarding the Goal Attainment Scale unequivocally significant results were not observed. An important factor that might have caused such an outcome is that defining the goals for the Goal Attainment Scale can influence the results in an unwanted manner: the formulation of the goals direct the patient's attention and change their subjective evaluation. For example, in the REFLEX study [6],

Table 1: Goal Attainment Scale as used in the REFLEX study.

Goal Attainment Scaling	Score	Goal description
Worse than start	-3	
Equal to start: the patient's initial condition; no change	-2	
Less than expected: slight improvement. But below the defined therapeutic goal	-1	
Expected goal: attains the defined therapeutic goal	0	
Somewhat more than expected: improvement slightly exceeds the defined therapeutic goal	+1	
Much more than expected: improvement clearly exceeds the defined therapeutic goal	+2	

pain occurred as a target for goal definition frequently. Now, pain perception has been consistently reported to be strongly modulated by attention [7]. Thus, if, for example, "less pain" is defined as goal, the patient's attention is directed toward the pain. Increased attention on pain may, as an example of measurement reactivity, result in a subjective increase of perceived pain, or trivially said: after someone has told you not to think about pink elephants, it`s almost impossible to keep them out of your mind. Potentially existing beneficial therapy effects are not recognized or underestimated by this attentional bias. It is therefore recommended, when selecting treatment goals and when formulating them, to use positive everyday activities or criteria of functionality (ICF items) that draw the patient's attention to the restored functionality. Negative goal formulation, such as "less pain" should be avoided to prevent the patient's attention to be too much directed toward a symptom. With positively formulated goals in the GAS, more sensitive instruments for the empirical measurement of therapeutic effects can be provided.

In summary, when defining negative goals, one focuses the patient's attention on these symptoms, which might result in the existing symptoms becoming emphasized too much. Especially in the perception of pain, which is strongly modulated by attention, this can lead to an unwanted subjective deterioration. Instead, we recommend choosing positive daily activities or criteria of functioning as goals for the evaluation of therapeutic success.

References

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