DO IMPROVEMENT SCORES OF FUNCTIONAL INDEPENDENCE MEASURE REFLECT URINATING FUNCTION?

Hypothesis / aims of study
Functional Independence Measure (FIM) is employed for ADL evaluation in rehabilitation treatment.(1) FIM scores evaluate each of the subscales of self-care, excretion, transfer, motor and cognition. On the other hand, urination does not solely require the lower urinary tract function but also various cognition and motor functions such as going to the toilet and (un)dressing in its course.(2,3) In this study, we have examined whether the improvements of FIM scores reflect urinating function.

Study design, materials and methods
Candidates are twenty hospitalized patients undergoing rehabilitation from brain hemorrhage, spinal disorder and rectal cancer operation that were taken care of by the Toilet Support Committee from 2011 to 2012. Patients above were measured their FIM scores before and after the rehabilitation treatment. The urinating conditions were divided into six stages and numerically rated from 0 to 5 scores, namely: 0) transurethral catheter placement, 1) catheterization, 2) total incontinence, 3) partial incontinence, 4) incontinence pad usage during nighttime 5) independent urination. We made a comparative review of each FIM improvement scores and urinating condition improvement scores.

Results
FIM total improvement score except for excretion subscale was 17.3±3.5 with urinating condition improvement score of 3.0±0.4, each significantly showing the improvement through rehabilitation. FIM exertion subscale improvement score and urinating condition improvement score were positively correlated with each other (r=0.464 and p=0.038). However, urinating condition improvement score was insignificantly correlated with other FIT subscales. FIM total improvement score except for exertion subscale and urinating condition improvement score also had no significant correlation with each other (r=0.379 and p=0.099). However, the final FIM exertion subscale improvement score and final urinating condition score had significant correlation with each other (r=0.421 and p=0.064) and FIM self-care subscale and final urinating condition score likewise had significant correlation with each other (r=0.525 and p=0.016).

Interpretation of results
There is variability among the improvements of transfer, motor and cognition since the causative disorders do not derive from a particular brain area and there is a few number of cases to be examined thus the degrees of incontinence and the urinating conditions were also mixed. This result indicates the possibility that the motor and cognition improvements enhanced by rehabilitation did not necessarily exert significant influence on urination itself. Moreover, as FIM evaluates the degree of autonomy, the evaluation does not necessarily reflect the improvement of lower urinary tract function, which highlights the need for another measure that takes into account detailed motor and cognition improvements. However, since the final FIM score and the final urinating condition score have a significant correlation, patients with high FIM scores are believed to deserve positive consideration for better urination.

Concluding message
Patients with higher FIM scores are perceived to be capable of better urination.

References

Disclosures
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