Interest of visual biofeedback rehabilitation on balance in the lower limb amputee

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Objective The aim of our study was to evaluate the role of the visual biofeedback in balance disorders in lower limb amputees.

Material/Patients and methods A prospective study performed in lower limb amputees followed at the Physical Medicine and Rehabilitation department of the University Hospital of Monastir. The first group received visual biofeedback on the balance platform combined with conventional rehabilitation of balance disorders. The second group of patients was treated only by conventional rehabilitation. Patients were evaluated clinically before and after each program. The total duration of the protocol was 24 sessions.

Results Ten patients participated in our study. Five patients received only conventional rehabilitation and the five others were treated also using visual biofeedback. Both groups were clinically improved. Patients benefiting from visual biofeedback rehabilitation had a statistically greater improvement in the gain on the functional scores (L Test, monopodal support) as well as an improvement in the area and length of the center of pressure in the stabilogram with closed eyes.

Discussion/Conclusion Visual biofeedback rehabilitation seems to improve the integration of proprioceptive information with a functional gain.

Keywords Lower limb amputees; Balance rehabilitation; Visual biofeedback

Disclosure of interest The authors have not supplied their declaration of competing interest.

http://dx.doi.org/10.1016/j.rehab.2017.07.200