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## A new adaptive method for using mirror therapy in a facial paralysis patient

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Facial paresis (FP) is one of the most common and most significant complications after cerebellopontine angle (CPA) tumor resection. This complication has a major impact on the quality of life. Mirror therapy (MT) is a method which is generally used for motor function recovery of stroke and phantom limb pain among amputees. The aim of our study is to determine the effect of MT on a post-op CPA chronic FP patient. A patient who is 53 year old had FP after CPA tumor resection in 2011. The evidence of reinnervation was seen in electromyographic assessment in one year later. The facial impairment was assessed by using House-Brackmann Facial Nerve Grading System (HBFGS) and Sunnybrook Facial Grading System (SFGS). In the treatment, MT and facial massage and exercise were performed for five times/week during six months. In MT training, two mirrors were used in vertical position to each other and patient was asked to see only the unaffected side on mirror while affected side eye were closed. Pre and post-treatment score of HBFGS were changed three to two. Total scores of SFGS were promoted 31 to 79, resting symmetry scores were 15 to 5, symmetry of voluntary movement scores were 52 to 80, scores of synkinesis were six to one. To our knowledge, there is no study to use MT on a FP patient in the literature. MT treatment appears to provide improvement in a post-op CPA chronic FP patient. Further researches are needed to determine the effect of MT.

### Biography

Hilal Denizoglu Kulli is pursuing PhD in Biomedical Engineering and she is a Teaching Assistant in the Faculty of Health Sciences, Division of Physiotherapy and Rehabilitation at Bezmialem Vakif University. Her research interests include "Biomechanics of human, cardiopulmonary and neurological rehabilitation especially stroke, exercise sciences.

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