

## Terapija z ogledalom pri pacientu s fantomsko bolečino po amputaciji – poročilo o primeru

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**Uvod:** Večina pacientov po amputaciji uda poroča o občutenju manjkajočega uda. Od 60 do 90 odstotkov vseh pacientov po amputaciji naj bi poročalo tudi o fantomski bolečini. To je bolečina amputiranega uda, ki največkrat preide v kronično bolečino in jo je težko zdraviti (1). Pacienti jo opisujejo kot krčevito, intenzivno in pekočo bolečino ter kot občutek nenormalnega položaja uda (2, 3). Fantomska bolečina pomembno zmanjšuje kakovost življenja teh oseb. Pri zdravljenju se uporabljajo zdravila in različne metode fizioterapije, tudi terapija z ogledalom. Na podlagi Ramachandranove teorije o delovanju terapije z ogledalom lahko s primerno vidno povratno informacijo (odsev neokvarjenega uda) vplivamo na zaznavanje na ravni možganov in posledično zmanjšamo bolečino (4). Namen poročila o primeru je bil dokazati učinkovitost terapije z ogledalom na zmanjšanje fantomske bolečine pri pacientu po nadkolenski amputaciji. **Metode:** Sodeloval je 35-letni pacient dva meseca po nadkolenski amputaciji z vsakodnevno fantomsko bolečino. Z enim delom vprašalnika za oceno proteze (angl. ProsthesisEvaluationQuestionnaire – PEQ) je bila ocenjena fantomska bolečina pred začetkom, enkrat na teden ter po štirih tednih terapije z ogledalom. Pacient je imel dvajset 15-minutnih terapij. Terapijo je izvajal v polsedečem položaju z ogledalom med obema iztegnjenima spodnjima udoma. Pacient je v ogledalu opazoval zdravi ud ter izvajal gib dorzalne in plantarne fleksije stopala. Poleg te terapije je izvajal še druge fizioterapevtske postopke in prejemal protibolečinska zdravila. **Rezultati:** Po štiritedenski terapiji z ogledalom se je fantomska bolečina zmanjšala. Zmanjšala sta se pogostost bolečine (nekajkrat na dan) in njeno trajanje (od nekaj minut do ene ure). Bolečina je postala manj moteča, zmanjšala se je tudi njena intenzivnost. **Zaključek:** Terapija z ogledalom je zmanjšala jakost, čas trajanja in pogostost fantomske bolečine. Je lahko dostopna ter cenovno ugodna rešitev pri zdravljenju fantomskih bolečin po amputaciji uda in se lahko uporablja tudi v domačem okolju. Potrebne so nadaljnje raziskave s širšo skupino pacientov po amputaciji, ki ne bi prejemale druge protibolečinske terapije, da bi z dokazi podprli učinkovitost terapije z zrcalom na fantomsko bolečino.

**Ključne besede:** fantomski ud, amputacija, zdravljenje, vprašalnik PEQ, fantomske zaznave.

## Mirror therapy in a patient with the phantom limb pain – case report

**Background:** After the limb amputation, most patients report awareness of a phantom limb. Additionally, 60-90% of amputees report the phantom limb pain. This is a sensation of pain located in the amputated limb, which has a high rate of chronicity and is difficult to treat (1). They describe it as an intensive, burning, cramping pain and feeling of the phantom limb in sustained uncomfortable positions (2, 3). The phantom pain significantly reduces the quality of an amputee's life. Various methods are used for the treatment of physical and medical therapy and mirror therapy. On the basis of Ramachandran theory about mechanisms of mirror therapy, we can influence with suitable visual feedback (reflection unaffected limb) on perception at the brain level and consequently reduce pain (4). The purpose of this case report was to show the effectiveness of mirror therapy on pain reduction in patients with the above-knee amputation. **Methods:** A 35-year-old man two months after amputation above knee had severe phantom limb pain. The part of Prosthesis Evaluation Questionnaire (PEQ) was used at the beginning, between and at the end of the mirror therapy. All 20 15-minute treatments were distributed to four weeks. The therapy was carried out in half-sitting position, with a mirror placed between the lower extremities. The amputated limb was placed behind the mirror. With the unaffected leg he did movements of dorsal and plantar flexion of the ankle. During the mirror therapy he had other physiotherapy procedures and pain medicament therapy. **Results:** After four weeks of mirror therapy, the phantom limb pain decreased. Distraction, strength and duration of the phantom limb pain were reduced (from several minutes to one hour). **Conclusions:** The mirror therapy has influence on reduction of intensity, incidence and duration of the phantom limb pain. It is an accessible and cost-effective method for pain reduction and can be used in home environment. Further research with a wider group with no additional therapies to reduce pain is necessary to demonstrate the efficacy of the mirror therapy.

**Key words:** phantom limb, amputation, treatment, PEQ-questionnaire, phantomsensations.

### **Literatura/References:**

1. Foell J, Bodman BR, Diers M, Flor H (2014). Mirrortherapyforphantom limb pain: Brainchangesandthe role ofbodyrepresentation. *EJP* 18: 729–39.
2. Nicole EA, Souvlis T, Moseley GL (2007). Stroke, complexregionalpainsyndromeandphantomlimbpain: cancommonalitiesdirect future management?. *J Rehabil Med* 39: 104–14.
3. Ramachandran RD, Ramachandran VS (1996). Synesthesia in phantomlimsinducedwithmirrors. *TheRoyalSociety* 263: 377–86.
4. Puh U, Hlebš S (2013).Učinki in mehanizmi delovanja terapije z ogledalom-pregled literature. *Zdrav Vestn* 82: 410–18.