

Does the functional improvement justify the Krukenberg procedure in patients with unilateral hand amputation and no visual impairment? A systematic review

Tamsin Nicholson

Swansea University Medical School

Established in 1917, the KRUKENBERG procedure separates the forearm into two opposable rays. Originally indicated in blind bilateral hand amputees, we seek to ascertain if the procedure delivers justifiable functional improvement in patients with unilateral amputation and no visual impairment. We have conducted a systematic review and narrative synthesis of 11 papers identified through database searches and screening of references. We find that the Krukenberg procedure does deliver functional improvement which would justify the procedure in patients requiring bilateral tactile sensation, especially if this would facilitate employment. Patients who require bilateral grasping function may also benefit if they lack access to sophisticated prostheses and their maintenance. The procedure may be of limited value to other patient groups.

