

ManuLoc® long

EFFECTS OF A HAND ORTHOSIS ON PATIENTS SUFFERING FROM VARIOUS WRIST PROBLEMS

INTRODUCTION

The wrist must be stabilized and immobilized in the case of many injuries and conditions to alleviate pain, accelerate healing, or secure the outcome of surgery.

There are various options to stabilize the wrist: a classic plaster cast or an immobilizing orthosis as an alternative.

The objective of the study is to describe and evaluate the practical use of a hand orthosis for different indications.

METHODOLOGY

Between January 2019 and September 2019, 86 patients were supplied with the ManuLoc long orthosis in 26 orthopedics practices.

About two thirds of the patients were female, one third was male. The average age was 52.5 years. 50% of patients were between 36 and 67.5 years old. (Fig. 1)

In each case, data on how often the orthosis was worn, how easy it was to handle, how comfortable it was to wear, and how well it fit patients was recorded. Patients were also asked about stabilization, support of the hand function, and how effectively they felt the orthosis reduced pain. Data was recorded by the treating physicians as well as by patients.

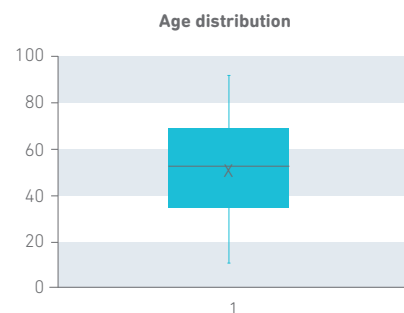


Fig. 1: Age distribution of patients treated, n = 86, box plot illustration, y axis = age in years

RESULTS

Treatment with the ManuLoc long took an average of 5.4 weeks, with 50% of all treatment being between 4 and 7.25 weeks. During the treatment period, the ManuLoc long was worn for at least 3 hours by 8% of patients, around 40% wore it for 5-8 hours, and more than 50% wore it for over 8 hours. (Fig. 2)

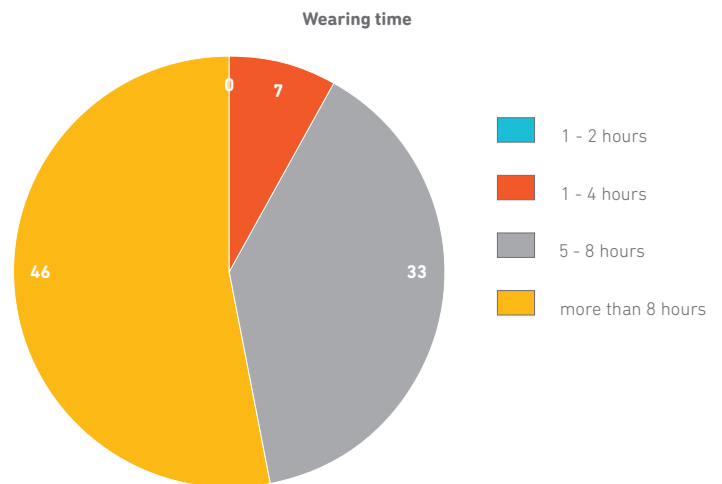


Fig. 2: Number of patients; grouped by orthosis wearing time in hours



RESULTS

The two most common indications were post-traumatic, such as “distal radius fracture” and “tenosynovitis”. (Fig. 3, Fig. 4)

The ManuLoc long was used in a pre-operative setting in 11% of cases, post-operatively in 31%, and 58% of patients were treated conservatively. (no figure)

68% of patients were also treated with an additional or several concomitant therapies. For the majority, anti-inflammatories, analgesics, and/or physiotherapy were prescribed in addition to the ManuLoc long. In some cases, manual therapy or stimulating electrical current was administered.

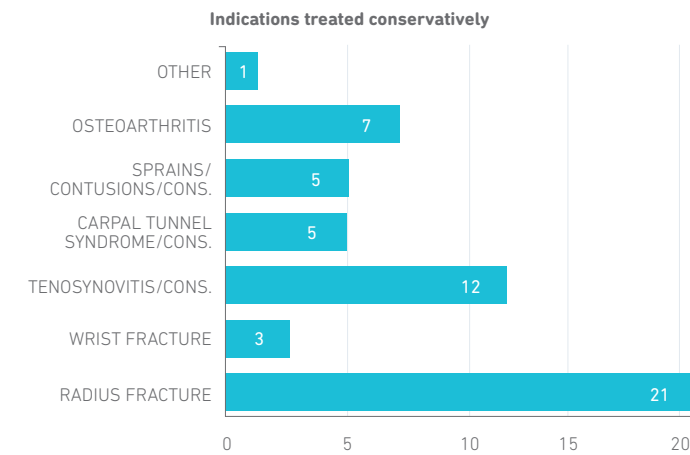


Fig. 3: Number of patients treated conservatively

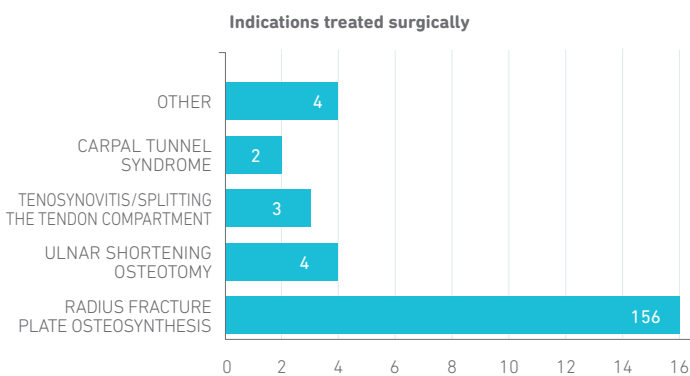


Fig. 4: Number of patients treated post-operatively

ASSESSMENT BY PHYSICIANS

Physicians rated stabilization by the ManuLoc long orthosis as good to very good in 97% of cases. (Fig. 5)

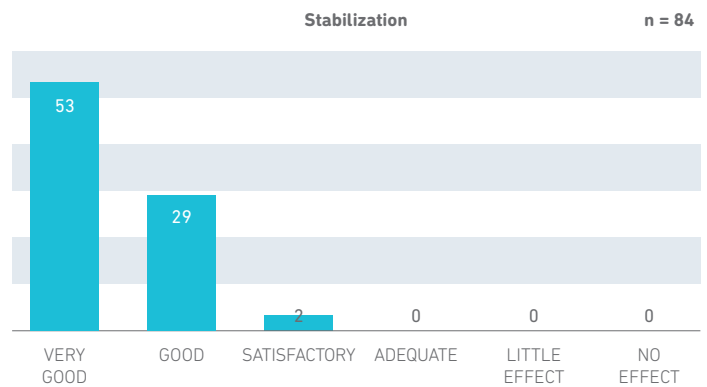


Fig. 5: Assessment of stabilization by the treating physicians

The treating physicians believed that in 87% of indications in this study, early functional treatment using the ManuLoc long would be possible to very much possible. (Fig. 6)

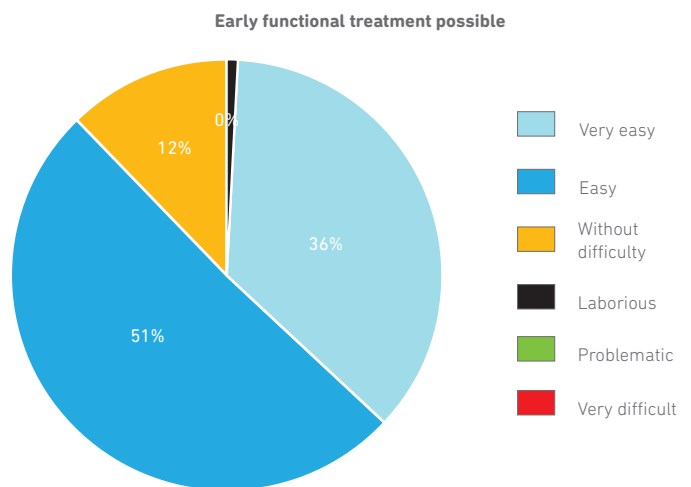


Fig. 6: Assessment of early functional treatment by the physicians

In 100% of cases, the physicians rated the ManuLoc long as a good to very good alternative to a plaster cast.



PATIENT ASSESSMENT

94% of patients rated the stabilization and the feeling of protection exerted by the ManuLoc long as good to very good. (Fig. 7)

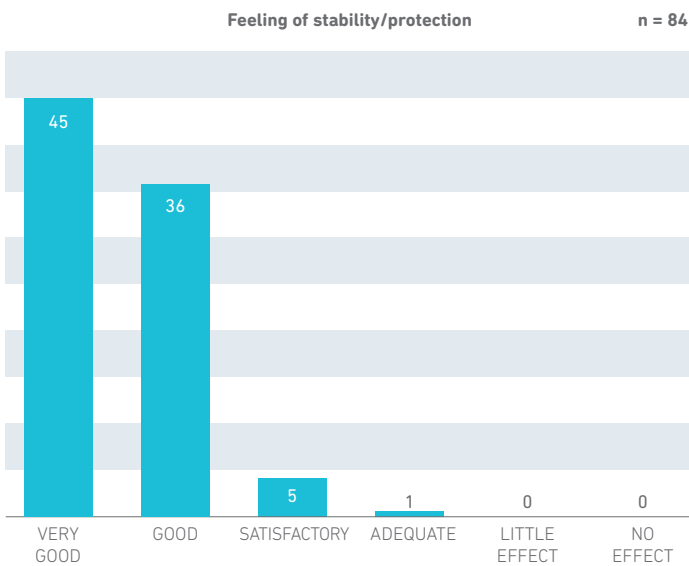


Fig. 7: Patient assessment relating to feeling of stability

On average, pain felt by patients before treatment was rated 6 using the VAS scale. After an average of 5.4 weeks, 73 of 86 patients reported that they experienced less to significantly less pain when wearing the ManuLoc long. 11 patients actually felt no pain after the treatment period. (Fig. 8)

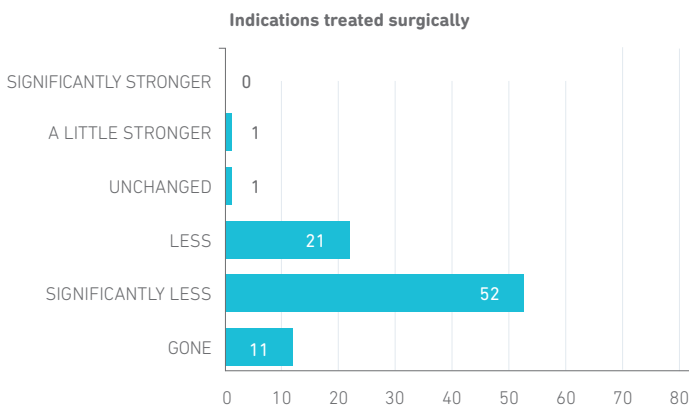


Fig. 8: Pain perception after 5.4 weeks of treatment using the ManuLoc® long

26% of patients rated wearing comfort, such as breathability, skin friendliness, or weight of the orthosis as excellent, 64% as good.

91% of patients rated the fit as good to excellent.

Donning and doffing of the product was rated as easy to very easy by 91% of patients.

77% of patients were able to perform everyday activities, such as light work in the kitchen or garden, shopping, etc. without restrictions or perform them well when using the ManuLoc long. (Fig. 9)

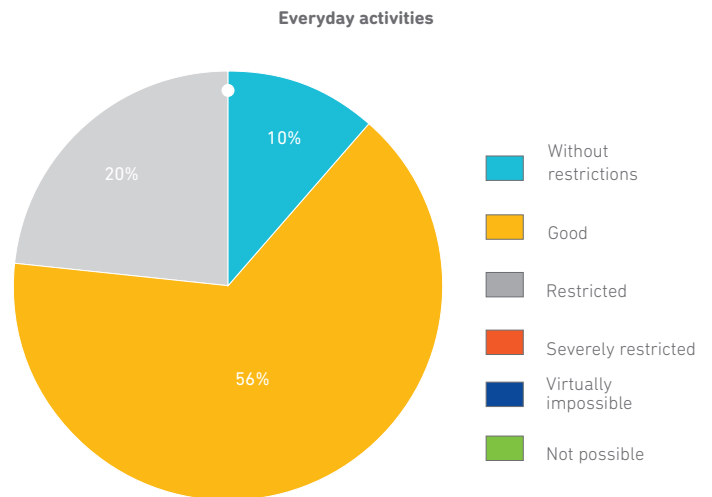


Fig. 9: Number of patients; how possible the use of the hand is during everyday activities

When asked about grasping movements with the fingers, e.g. to hold a comb, pen, or cutlery, about 85% of patients reported that this was possible without restrictions or that they were able to do it well using the ManuLoc long.



CONCLUSIONS

In their ratings, both physicians and patients indicated that the ManuLoc long hand orthosis offered good to very good stabilization. It immobilizes the distal and proximal wrist as well as parts of the forearm in a functional position. It secures the wrist during both extension/flexion and radial/ulnar movements, thanks to extended aluminum stays.

The fit, breathability, and skin-friendliness were rated as good or even excellent.

According to the treating physicians, the orthosis is highly suitable for use as an alternative to a plaster cast for a multitude of indications, and allows early functional treatment.

In most cases, patients reported that the orthosis led to significant pain reduction. Patients felt that the orthosis was pleasant to wear. They were more confident to use the affected hand because the orthosis protects against further injury while rebuilding strength in the arm.