



UNIVERSITÀ DEGLI STUDI  
DI MILANO

# REHABILITATION OF RADIAL CLUB HAND: OUR EXPERIENCE

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## BACKGROUND

Radial club hand is a congenital malformation that consists into a longitudinal distortion of forearm, frequently associated with hypoplasia or lack of the thumb. The combination of several issues (such as: short forearm, radial bow, absence of the thumb and poor range of motion of long fingers) affects the little patient's hand grip, which thus needs a significant intervention. In this way, rehabilitation represents the focus of pre and postsurgical treatment, with the aim to improve the functionality of the arm while the little patient is growing up.



## MATERIALS AND METHODS

This 5-years retrospective takes into account 15 patients and 21 arms in total, all affected by radial club hand. Their age ranges from 2 to 16 years old, they are 9 females and 6 males and their Bayne's classification is II-IV.

Our treatment usually starts straight after the first surgical visit and we treat the patient both before and after the surgery.

The highlights of our rehabilitation programme are:

1. the team' strong ties;
2. parents-surgeon-therapist reliable relationships and communication;
3. rehab daily sessions;
4. lasting results follow-up;
5. the use of several therapeutics tools such as stretching exercises and serial casting to avoid soft tissue contracture, taping techniques, muscle's electrostimulator, functional playing activities and scar's treatment.



## RESULTS

All of the examined patients show improvement both from an external and functional point of view, they gain better longitudinal forearm alignment that allows to place the hand correctly, thus increasing the manual ability. All the activities that characterize the child's daily routine in his growth such as playing, eating, exploring the surrounding space, leaning to stand up, gaining balance for starting to walk and grabbing items are improved.



## CONCLUSIONS

Rehabilitation in patients with radial club hand is a challenge, because of the number of issues affecting these patients. For this reason it is necessary to have a deep and personalized rehabilitation programme, which takes into account the needs of every single child. Deviations of the longitudinal plane need to be treated from their onset and this is only possible if we constantly monitor the child during his growth.



## REFERENCES

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