



COMPARISON OF SERIAL CASTING COMBINED WITH MOBILISATION AND CONVENTIONAL PHYSIOTHERAPY IN THE MANAGEMENT OF DEFORMITIES OF PEOPLE WITH HAEMOPHILIA

Author- GEETA SURI- (Senior Physiotherapist), Dr Uttam garg (Orthopaedic surgeon), Sushrut Institute of Plastic Surgery, Burns & Trauma (SIPS), 29 Shah Mina Road, Chowk Luck now, India

Co-author- RAKESH KUMAR, Senior physiotherapist, Gwynedd Hospital, Bangor, United Kingdom, LL57 2PW

INTRODUCTION

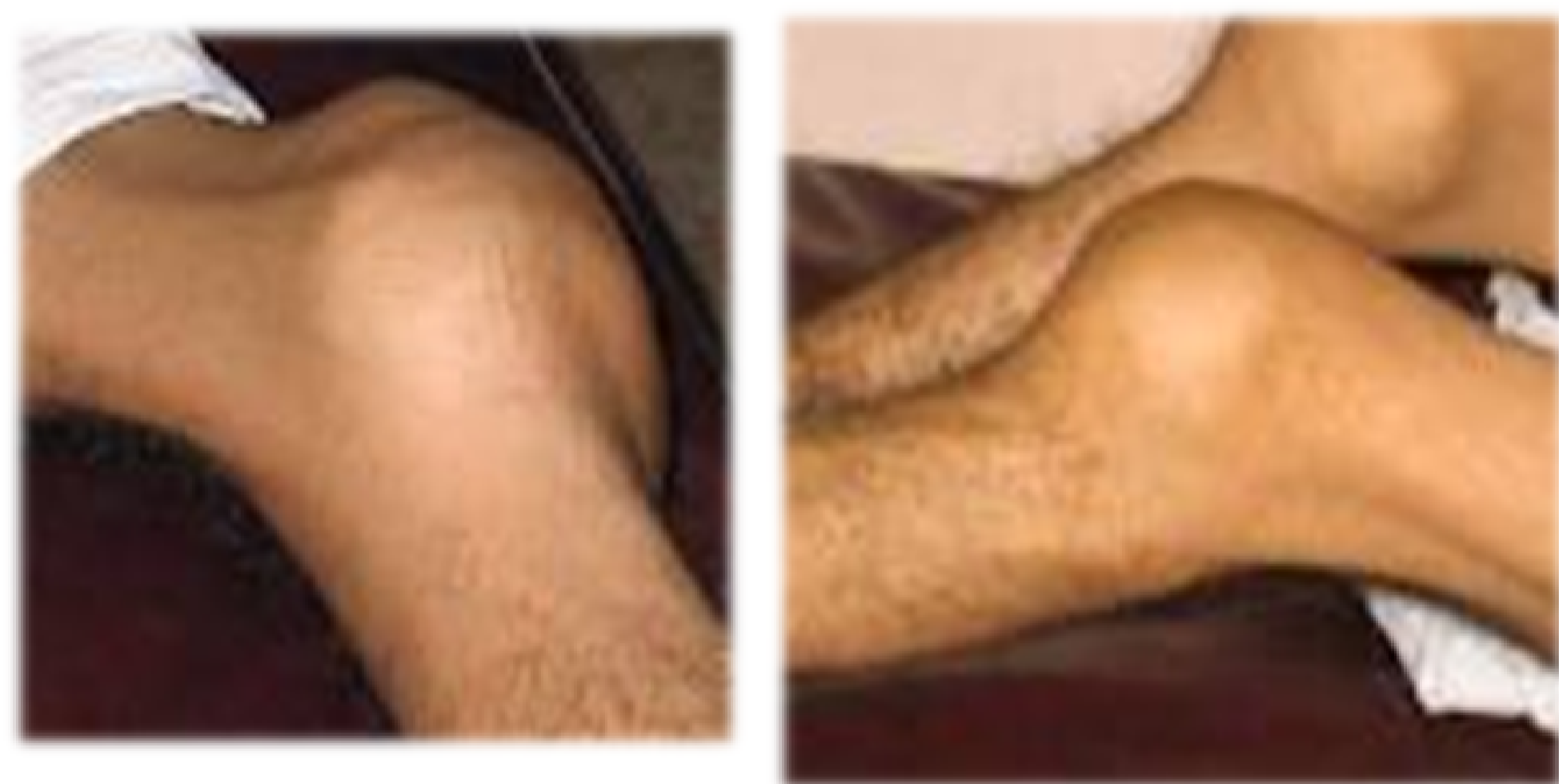
Hemophilia is an X-linked inherited recessive bleeding disorder that results from a deficiency or functional defect of coagulation factor VIII (type A) or factor IX (type B) – (fernandez-Palazzi F, Hernandez S, De Bosco N, De Saez

A. Hematomas within the iliopsoas muscles in hemophilic patients, Clinical Othop and Related Research et al 1996)*. Bleeding directly effects on range of motion (ROM) in major joints resulting in limb deformities. Limitation of movement (LOM) of a joint is called contracture. Conventional physiotherapy treatment helps to improve ROM. Plaster serial casting along with physiotherapy help to improve ROM very quickly as compare to just conventional physiotherapy treatment.

AIM:

1. To compare between the two treatment groups to find out a more effective way of deformity correction.

2. Home education program for patient and family for joint protection, exercise, and conditioning.



Methods:

a. Sample Selection Criteria: - : 40 subjects with hemophilia age group between 10 to 35 years, attending the Hemophilia clinic with flexion deformities in the knee joint, were included in this study. All 40 participants were randomly divided into two equal groups (**control group and interventional group** of 20 participants each). All patients had joint deformities related to repeated bleeds in the knee joint. An initial assessment was done for both the groups, which included the range at the knee which was measured using goniometer.

b. Inclusion criteria: - PWH with history of previous joint bleeds (Knees) with hematomas within the iliopsoas muscles in hemophilic patients with severe or moderate hemophilia suffering from deformities or contractures.

c. Ethics: The study was approved by the ethics committee of the Sushrut Institute of Plastic Surgery and Hospital (SIPS), Lucknow.

d. Conventional physiotherapy: - In group-A received conventional exercises for 6 week. These exercises included isometric contractions, active-passive and assisted exercises. Also, in some patients electro therapy was also provided.



e. Serial casting and exercises: - In group-B mobilization and serial casting for 6 weeks. casting was done by qualified physiotherapist under close supervision of orthopedic consultant to correct deformities along with exercises in different phases.

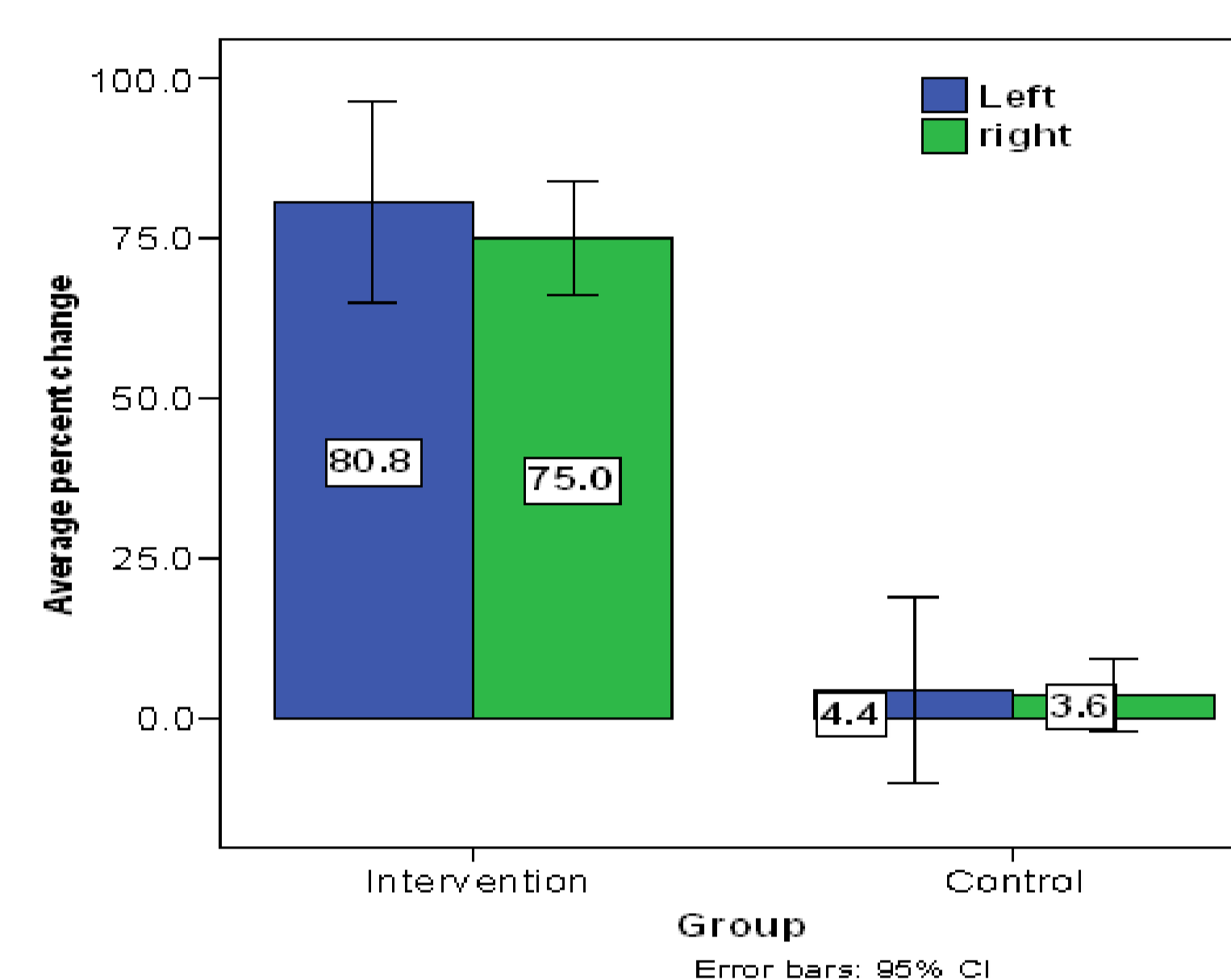


f. Measurements: - Intervention was in different phases, examination done by experienced physiotherapist in both groups each week up to end of the week. Measurement of deformity was measured before starting intervention of exercise, and after casting. Measurement was reviewed after each week time up to end of 6 week.

Analysis: All the analysis was carried by using SPSS 15.0 version.

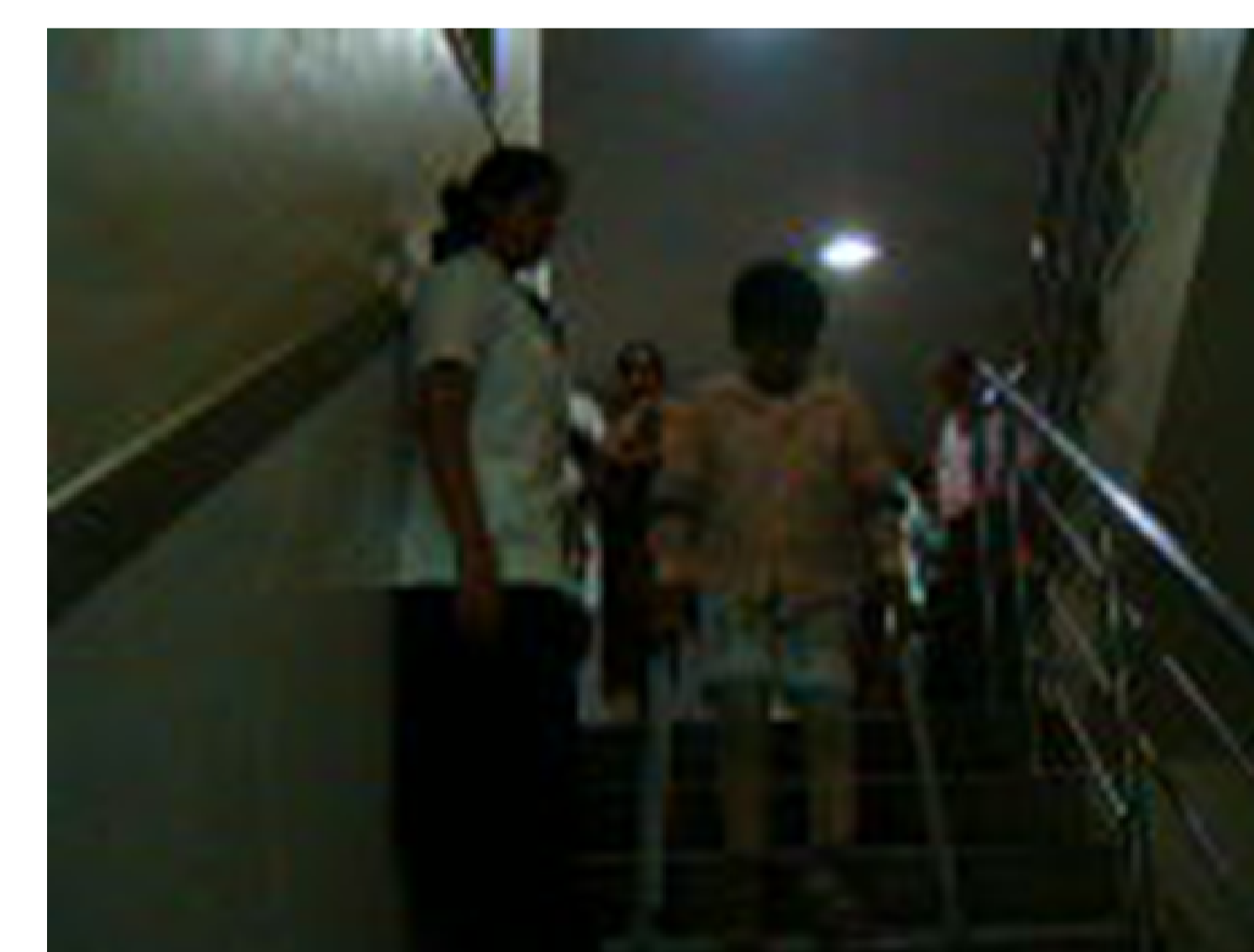
Results / findings:

No significant ($p > 0.05$) difference was found in both the left and right knee range before the start of the therapy between Intervention and Control groups. There was significant ($p < 0.0001$) improvement in the left knee range in the intervention group from pre-treatment (46.79 ± 7.23) to post treatment (8.93 ± 4.88).



Conclusions:

The serial casting combined with mobilization is more effective in increasing the range when compared to conventional physiotherapy for correcting the deformities in people with hemophilia.



ACKNOWLEDGEMENT: I would like to express my gratitude to all those who gave me the possibility to complete this study special thanks to doctors and staff at SIPS hospital. I deeply indebted to Dr Alok Srivastav (Doctor) and Joshua (PT) of CMC Vellore.

REFERENCE: ernandez-Palazzi F, Hernandez S, De Bosco N, De Saez A. Hematomas within the iliopsoas muscles in hemophilic patients, Clinical Othop and Related Research et al 1996)*.)*.

