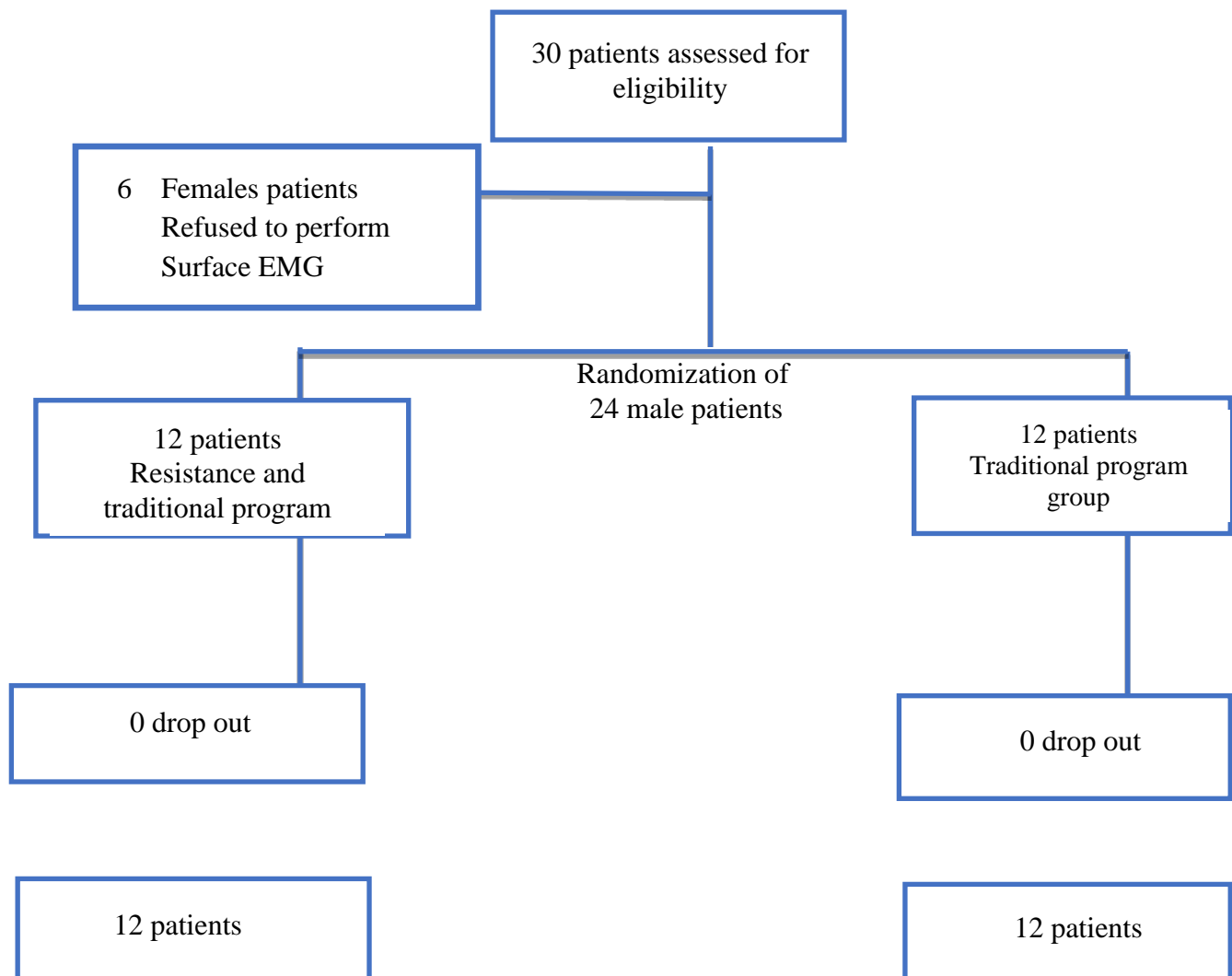


SUMMARY OF RESULTS

The present study was done to assess and investigate the therapeutic effect of resistance exercises of non-paretic hip adductors and abductors on strength of hip adductors and abductors of paretic limb and functional activities and to determine pattern of muscle activity after application of this resistance program.

Baseline characteristics: Twenty-four male patients with ischemic and hemorrhagic stroke represented the sample of the study. Their age ranged from 45 to 76 years. The Patients were assigned randomly into two equal groups; The control group treated by standard physical therapy program, and the intervention group treated by the same program in addition to resistance exercises program for adductors and abductors muscles of non-paretic extremity. Treatment session was one-hour session per day, 3 times a week for 6 successive weeks.

Flow chart of RCT



Outcome measures:

Portable dynamometer was used to assess any increase in muscle forces of paretic and non-paretic lower limb muscles. **Neurosoft Surface EMG** was used to assess any change in pattern of activation (delay time) between both lower extremities. Also, **Functional independence measure scale** was used to assess any improvement in functional activities of these patients. All patients were assessed pre and post intervention.

In intervention group, paretic hip muscles strength increased significantly in between group comparison. Functional independence measure improved in both groups but in comparison between groups, there was not significant change. Pattern of muscle activation between hip adductors and abductors decreased but without significant change in comparison between groups.

Resistance exercises for non-paretic lower limb muscles may result in short term improvement on paretic limb muscles strength and functional activities of patients with chronic stroke **without any adverse events.**