

**Clinical Evaluation of Shirodhara and Matra Vasti with Baladi
Yoga on Motor Deficit and Fatigue after Stroke (Pakshaghata)**

By

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Clinical Evaluation of Shirodhara and Matra Vasti with Baladi Yoga on Motor Deficit and Fatigue after Stroke (Pakshaghata)

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ABSTRACT

Pakshaghata is one of the most disabling diseases that leads to reduction of quality of life. According to Ayurveda, Pakshaghata is manifested due to vitiation of Vata Dosha and it may also be associated with Pitta or Kapha Dosha. Pakshaghata can be correlated with stroke, especially with hemiplegia / hemiparesis in modern medical science. Either left or the right side motor deficit is the main cardinal feature of the stroke (Pakshaghata). Fatigue after stroke (Pakshaghata) is a common complaint but a still an unexplored and neglected condition. Fatigue is defined as feeling of lack of energy, weariness, and aversion to effort and is usually not ameliorated by rest. It is an important cause of long term morbidity and has a negative impact on functional recovery of stroke (Pakshaghata). In modern aspect, mechanism of fatigue after stroke is not well understood and may be associated with a number of psychosomatic factors. In Ayurveda, the terms Ayasa, Shrama, and Klama resemble fatigue. Effective treatments to improve motor functions and alleviate fatigue after stroke (Pakshaghata) are still lacking. Hence this study was designed for the clinical evaluation of Shirodhara and Matra Vasti with Baladi Yoga on motor deficit and fatigue after stroke (Pakshaghata). The ultimate aim of this study is to improve the quality of life of the patients after stroke (Pakshaghata). In this study, 45 patients with motor deficit and fatigue after stroke (Pakshaghata) were randomly selected and divided into two groups; namely, group A and group B. Among them 40 patients were completed the treatments. Initially, both the groups were treated with Baladi decoction (Bala Bilva Shunti Kashaya) 120 mL orally twice a day, consequently for 7 days. Then from 8th day to 21st day, group A was treated with Shirodhara for 45 minutes using Shuddha Bala Taila along with Baladi decoction (Bala Bilva Shunti Kashaya) while group B was treated with 72ml of Matra Vasti using Shuddha Bala Taila along with Baladi decoction (Bala Bilva Shunti Kashaya). Clinical study was carried out at Ayurveda Teaching Hospital Borella, Sri Lanka and

Ayurveda Hospital, Narammala, Sri Lanka. Motor deficit, fatigue after stroke and quality of life were evaluated by Motricity index (MI), Fatigue Severity Scale (FSS) and Short version of the Stroke-Specific Quality of Life Scale (SSQoL-12) respectively. The results were evaluated within the groups on 7th, 14th, 21st day and 49th day (4 weeks after discontinuation of the treatment). The effects of treatments were compared between the two groups on the 21st day.

The results revealed that, on the 7th day, in both groups, increase of arm, leg, side score and decrease of fatigue severity score were not statistically significant when compared with base line. On the 14th day in group A increase of arm score was statistically significant while in group B increase of arm score was statistically highly significant when compared with base line. On the 14th day, in both groups, increase of leg and side score was statistically highly significant when compare with base line. On the 14th day, only in group A, decrease of fatigue severity score was statistically highly significant when compared with base line but the fatigue severity mean score did not indicate reduction of fatigue after stroke. (FSS mean score of ≥ 4 indicate fatigue). On the 21st day in both groups increase of arm, leg and side score and decrease of fatigue severity score was statistically highly significant when compared with base line but only in group A, fatigue severity mean score indicated reduction of fatigue after stroke. Therefore it is suggested that conduction of treatment which is used in group A for a period of 21 days is beneficial to reduce fatigue after stroke.

Follow ups were done on the 49th day that is 4 weeks after discontinuation of the treatment. On the 49th day in both groups increase of arm, leg, side score and decrease fatigue severity score was statistically highly significant when compared with base line but only in group A fatigue severity mean score indicated reduction of fatigue after stroke.

When the results of the 21st day between the two groups were compared, it was observed that the treatment of group B was more effective than that of group A in terms of improvement of on motor function of arm, leg, side of the body and also physical dominant quality of life. Treatment of group A was more effective than group B in alleviation of fatigue after stroke and in improvement of psychosocial dominant quality of life.

In this clinical study it was also revealed that improvements in percentage of arm, leg and side score were higher if treated during early months, since stroke that is to say 0.5-1.5 and 1.5 - 3.0 months in both groups. Improvement was comparatively lesser when treated later that is to say 3.0 - 6.0 months 6.0 - 9.0 months while there was no any improvement seen in 9.0 - 12.0 months after stroke

The ingredients of Bala Bilva Shunti Kashaya possess Ama Pachana, Srotas Shodhana and Vata Dosh Hara properties and ingredients of Shuddha Bala Taila possess Snigdha, Guru, Ushna , Balya, Hridya, Manah Prasadaka, Vata Pitta Shyamaka, Shramahara and Ojas Vraddikara properties. In addition to these properties Shirodhara has the effect of increasing the stability of Manah (mind) and Bala (body strength), increases Druthi (comprehension), Suswapna (improves sleep), Shramahara (removes fatigue) and overcomes pathogenesis of fatigue after stroke rather than the motor deficit in Pakshaghata. In addition to aforesaid properties of Bala Bilva Shunti Kashaya and Shuddha Bala Taila Matra Vasti has the ability to bring vitiated Dosa to Koshta and expel them. Matra Vasti also has ability to nourishment of the body instantaneously and cures the diseases caused by aggravated Vayu including Pakshaghata. This process may overcome the pathogenesis of motor deficit rather than the fatigue after stroke in Pakshaghata.

In conclusion, findings of the present clinical study suggest that both treatments are capable in improving the quality of life while Shirodhara using Shuddha Bala Taila along with Baladi decoction (Baladi Yoga) treatment was capable of alleviating fatigue after stroke. Matra Vasti using Shuddha Bala Taila along with Baladi decoction (Baladi Yoga) treatment was capable in improving on motor function of arm, leg and side of the body in patients of stroke (Pakshaghata). Improvement in percentage of arm, leg and side score was higher when treated early months since stroke. Early intervention is recommended in order to obtain better results. The researchers were unable to calculate statistical significance in increase arm leg and side score with period of month since stroke as the sample size was too small. Further studies with large samples are recommended.