

Effectiveness of Infrared Radiation (IRR) and Shortwave Diathermy in the Diabetic Patients with Frozen Shoulder (Adhesive Capsulitis)

Dr. Ashutosh Kumar Srivastav (PT)

Department of Biochemistry, Faculty of Allied Health Science, Mahayogi Gorakhnath University, Gorakhpur (U.P.) India 273007

*Corresponding Author E-Mail: [ashutoshsrivastav3\[at\]gmail.com](mailto:ashutoshsrivastav3[at]gmail.com)

Abstract: Objective: The purpose of the study to find out the effectiveness of the IR and SWD in the diabetic patients with the frozen shoulder (adhesive capsulitis). Methods: Diabetic patients having adhesive capsulitis were included, who were advised for physiotherapy treatment. At first, detailed history, clinical examination and necessary investigations were carried out properly. The subjects were selected according to some selection criteria. One hundred fifty patients were selected according to the selection criteria by non-probability convenience sampling. Grouping was done randomly and was divided into two groups. Group-A: 75 patients were treated with HEP, Grade-I&II Shoulder Mobilization and SWD, Group-B: 75 patients were treated with HEP, Grade-I&II Shoulder Mobilization and IRR. Follow up of the patients were done weekly for 4 weeks and the outcome was recorded. Assessment of the patients was done by Visual Analogue Scale, Shoulder pain and disability index (SPADI), chi-square test. The results were expressed as mean \pm standard deviation (SD) and $p < 0.05$ was considered as the level of significance. Results: A total of 150 diabetic patients having adhesive capsulitis included in the study group. Among them 50 % were male and 50% were female. In our study the mean age of the patients of both sexes was 46.30 ± 8.75 years. Out of 150 patients irrespective of sex, most of the patients (43.3%) belong to age group of 40-49 years followed by 50-59 years (25.9 %), 30-39 years (21.4 %) and 60-70 years (9.4 %) age group. The subjects were most frequently found in people who works in an office (48.12%) followed by teachers (9.8%) and then housewife (7.9%). People having lethargy lifestyle are more affected than active life style. It was found that the patients of Group-B became significantly improved than Group-A in all the assessment tools namely VAS, SPADI. It indicates that treatment of diabetic patients having adhesive capsulitis with HEP, Grade-I&II Shoulder Mobilization and IRR gives better results than treated with other regimen used in this study. Here, it was also found that IRR is significantly effective than SWD in treating adhesive capsulitis in diabetic patients. Conclusions: It may be concluded that SWD has less effective than IRR in the diabetic patients having adhesive capsulitis.

Keywords: Adhesive Capsulitis, Frozen shoulder, Infrared Radiation, Shortwave Diathermy