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EFFECTIVENESS OF WARM COMPRESS ON LEVEL OF DRY EYE AMONG ELDERLY CLIENTS IN SELECTED OLDAGE HOMES, CHENNAI

Nursing

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ABSTRACT

Background: Dry eye is the common complaint of patients presenting to ophthalmologist. Warm compresses at 105 0F have been shown to thicken the tear film lipid layer, decrease tear film evaporation, improve tear film break-up time, decrease ocular surface staining and improve dry eye symptoms among elderly clients. The aim of this study was to assess the effectiveness of warm compress on level of dry eye among elderly clients at selected old age home in Chennai.

Methods: This study based on quantitative evaluative approach with quasi experimental pre and posttest control group design. The total of 60 elderly clients were selected through non-probability convenience sampling technique among 30 were experimental group from Brindavanam Old age Home and 30 were control group from Vetri Old age Home. The tool was structured interview schedule and Schirmer's test. The warm compress was applied for 10 minutes intermittently in morning and evening for 7 days on both eyes for experimental group.

Results: The elderly clients in experimental group 43.3% were in >76 years of age where as in control group 12(40%) were in >76 years. In experimental and control group of right eye, posttest mean and SD score was 10.06±3.17 and 7.70±1.03't' test score was 3.76. In experimental and control group of left eye, posttest mean and SD score was 11±3.49 and 7.9±0.94't' value was 4.15, which was significant at P£0.05 level.

Conclusions: This study concluded that warm compress was effective in reducing the level of dry eye among elderly clients.

KEYWORDS

Warm compress, Dry eye, Elderly, Chennai

INTRODUCTION

Dry eye is the common complaint of patients presenting to ophthalmologist[1]. Dry eye is caused by decreased aqueous tear production due to lacrimal gland disease or increased tear evaporation, primarily due to meibomian gland disease and decreased blink mechanism to spread tears, and decreased afferent and efferent nerve functions that interconnect this component[2,3].

Warm compresses at 105 ^{0}F have been shown to thicken the tear film lipid layer, decrease tear film evaporation, improve tear film break-up time, decrease ocular surface staining, and improve dry eye symptoms. A waterless, portable system is also available that heats automatically to 105 ^{0}F for 5 minutes. Warm compresses can be beneficial if used in the morning and also can help dry eye symptoms if used in the early afternoon[4]. Studies are proved that the prevalence of dry eye increases when the age advances i.e. in the age group of >65 years is approximately four times more than the age of <65 years[5].

The investigator during her clinical and community experience got exposed to various types of dry eye with elderly and found that soreness is one of the most devastating complaints of these patients which is newer and is relieved completely through pharmacological management. Even though getting pharmacological soreness management, the dry eye patients experience soreness. This made the investigator realize the need for incorporating certain alternative therapy and the most cost effective one found was warm compress to reduce dry eye. The aim of this study was to assess the effectiveness of warm compress on level of dry eye among elderly clients at selected old age home in Chennai.

METHODS

This study based on quantitative evaluative approach with quasi experimental pre and posttest control group design. The total of 60 elderly clients were selected 30 were experimental group and 30 were control group. On the first week elderly clients who fulfilled the inclusion criteria were selected from the old age home by non-probability convenience sampling technique and their general information was collected by using structured interview schedule and their dry eye was measured by using Schirmer's test[6] for both experimental and control group. In experimental group warm compress was applied on both eyes intermittently for 10 minutes morning and evening for 7 days. In control group warm compress was not applied. The data were analyzed by using both descriptive and inferential statistics. The data related to demographic variables were analyzed by using descriptive measures (frequency, percentage) and dry eye among elderly clients will be analyzed by using descriptive statistics (mean, standard deviation). The effectiveness of warm compress on dry eye was analyzed by't' test. The association between the dry eyes with selected demographic variables was analyzed by using chi-square test.

RESULTS

The demographic variables of the elderly clients in experimental group 43.3% of them were in >76 years of age where as in control group 40% of them were in >76 years. Majorities were 53.4% females in the experimental and in control group 63.4% were females. In experimental group 83.3% were married and control group 80% were married. Nearly 83.3% were habit of smoking and in control group 86.7% were having habit of smoking. In experimental group 21(70%) were habit of alcoholism and in control group 86.7% were habit of alcoholism. Majority 83.3% were having hobbies of watching television in experimental group about 46.6% were having hobbies of watching television in control group. (Table1)

In pretest 90% had mild dry eye at right side in experimental group, whereas 53.3% had mild dry eye in control group, 70% had mild dry eye at left side in experimental group, whereas 73.3% had mild dry eye in control group. In posttest 40% had normal at righty eye whereas 46.6% had normal at left eye in experimental group. In control group 60% had mild dry eye at right eye whereas 66.7% had mild dry eye at left eye. (Table 2)

In percentage distribution of elderly clients according to their pretest dry eye majority of them had mild dry eye in experimental and control group. The pretest and posttest mean, SD (Left eye) was 8.16±1.06 and 11.0±3.49 and mean difference was 2.84, (Right eye) was 8.33±0.32 and 10.06±3.17 and mean difference was 1.73 in experimental group and in control group (Left eye) 8.13±0.80 and 7.9±0.94 and mean difference was 0.23 (Right eye) 7.53±1.01 and 7.70±1.03 and mean difference was 0.17.

The mean difference shows that dry eye was reduced in experimental group than in control group. The 't' test value (Left eye) 4.15, (Right eye) 3.76 was greater than the tabulated value (2.01) at P<0.05 level. The warm compress was effective in reducing dry eye. Hence hypothesis H_1 is retained. There was significant association between the dry eye (Right eye) with age and habit of smoking at P<0.05 level in experimental group. There was significant association between the dry eye (Left eye) with age at P<0.05 level in experimental group. Hence H_2 is retained in experimental group and control group was rejected.

DISCUSSION

This study was done to determine the effectiveness of warm compress on level of dry eye among elderly clients in selected old age homes, Chennai. In pretest right eye 90% clients had mild dry eye, 10% clients had moderate dry eye whereas in left eye 70% clients had mild dry eye, 30% clients had moderate dry eye. In control group right eye 53.3% clients had mild dry eye, whereas 46.7% clients had moderate dry eye. In left eye 73.3% clients had mild dry eye and 26.7% clients had moderate dry eye. In the experimental group right eye, the pretest mean, SD score was 8.33±0.52, posttest mean, SD score was 10.06±3.17, left eye pretest mean, SD score was 8.16±1.06, posttest mean, SD score was 11±3.49. In control group right eye, the pretest mean, SD score was 7.53±1.01, posttest mean, SD score 7.70±1.03, Left eye pretest mean, SD score was 8.13±0.80, posttest mean, SD score was 7.9±0.94. The 't' value in right eye 3.76 and left eye 4.15 which is significant at $P<0.05$ level. Thus the difference formed in the mean score value were true difference. Hence the research hypothesis H_1 is retained. This shows that warm compress on level of dry eye were effective among elderly clients. The present study was supported by the Sukhwinder Kaur et al 2013 to find effectiveness of warm compress on level of dry eye among elderly clients. In this study the warm compress were applied two times a day (morning and evening) for 7 days. The study result shows that there was significant reduction in mild dry eye after warm compress among elderly clients in experimental group ($p<0.01$)[7]. The pretest study findings reveal that there was significant association between the habit of smoking and age with dry eye (right eye) in the experimental group at $P<0.05$ level and in the control group there was no significant association with their selected demographic variables. Hence research hypothesis H2 is retained for age and habit of smoking and there was a significant association between the age with dry eye (left eye) in an experimental group at $P<0.05$ level. In the control group there was no significant association with the selected demographic variables. Hence research hypothesis H2 is retained for age only. Similar results were seen in studies by Tong, (2010) Factors significantly associated with symptomatic tear film dysfunction cigarette smoking and self-reported difficulty in performing daily activities.

CONCLUSION

This study was done to evaluate the effectiveness of warm compress on dry eye among elderly clients in a selected hospital, Chennai. The result of this study showed that the warm compress was effective among elderly clients in reducing dry eye in experimental group. There is significant association between dry eye with age and habit of smoking in experimental group.

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