SUMMARY

BACKGROUND

Overall, osteoarthritis affects 13.9% of adults aged 25 years and above and 33.6% of those 65 years and above. Among the over one hundred different types of arthritic conditions, osteoarthritis is the most common; affecting over 25 million people in the United States. Most of arthritis disability burden is attributable to the hips and knees. The pain and disability associated with osteoarthritis affects approximately 10% of men and 18% of women over 60 years of age. Current management focuses on pharmacological and non-pharmacological modalities. It has been shown that this combination leads to better outcomes in the management of knee osteoarthritis. Current pharmacological management is shifting towards the use of topical analgesics to avoid the side effects of systemic drugs notably NSAIDs.

AIM

The main objective of this study is to determine whether the combination of topical analgesic and patient education gave a better pain relief in patients with knee osteoarthritis compared with topical analgesics alone at the Family Medicine Practice Centre Gawu Babangida, Federal Medical Centre Bida.

METHODS

This was a single blind randomized control study; comparing mean pain scores of patients who had topical analgesics with those who had the combination of topical analgesics and patient education over a 12 week period. The study was conducted between November 2013 and February 2015.
2014. A total of 100 patients were recruited for the study out of which 9 were lost to follow up while 91 completed the study. A full physical examination of the knee as well as determination of the Body mass index was done at each visit. Sampling method was by systematic random sampling technique. Patients were allocated to control or intervention groups by picking folded papers labeled C or I; which placed them in either the control or intervention group. Each patient had a total of 4 visits; at four weekly intervals. The pain score was assessed using the visual analogue scale at each visit i.e baseline, week 4, week 8 and week 12. A record of the pain score at each visit was noted from which the mean pain score for each study period for each group was calculated. The improvement in mean pain score between the most recent visit and the last was determined by subtracting the previous mean pain score from the most recent. The improvements in mean pain scores between the two groups at each study period was compared using student t-test.

**DATA ANALYSIS:** Data was analyzed using SPSS (Statistical package for social sciences software, version 20). Analysis was by descriptive statistical methods, including means and standard deviations of both groups. Chi-square test was used to test for association between categorical variables. Student t-test was used to compare the means of the two groups and paired t-test was used to compare the improvement in mean pain score at each study period between the two groups. F-ratio was used to test association between sociodemographic factors and BMI with mean pain scores. Level of significance was set at p value of less than or equal to 0.05.

**RESULTS:**
A total of 91 patients with knee osteoarthritis were analyzed; 45 in the control group and 46 in the intervention group. The males constituted 29.7% while there were 70.3% females, giving a ratio of 1:2.4. The mean age of the study participants was 58.8% ±9.23 years. Majority of the patients
were middle aged 33(36.3%), 95 (93.4%) were married and 44 (48.35%) had no formal education and were involved in one form of business or another 34 (74.2%); majority were obese 35 (38.5%). Data analysis revealed that educational qualification had statistically significant relationship with mean pain scores. (F=2.750, p=0.033). However, age, gender, religion, marital status and individual income did not show any statistically significant relationship with mean pain scores. Results showed that patients receiving diclofenac gel alone and those receiving both diclofenac gel and patient education had improvements in mean pain scores at 12 weeks. However, there was no statistically significant difference in the improvements in mean pain scores between the two groups at 12 weeks (p= 0.674) Results also showed that there was a statistically significant difference in mean pain scores among patients with secondary and tertiary education compared to those with no formal and primary education (p=0.033).

**CONCLUSION**

The use of topical analgesics either alone or in combination with patient education led to a significant improvement in mean pain experienced by patients with knee osteoarthritis. There was a better improvement in mean pain scores at week 12 in knee osteoarthritis patients receiving a combination of topical analgesics and patient education compared with those receiving topical analgesics alone, however, this was not statistically significant (p=0.674). Educational qualification had statistically significant relationship with pain scores (P= 0.033). Patients with secondary and tertiary education had lower mean pain scores compared to patients with no formal and primary education.