INTRODUCTION

Recurrent sinusitis, a medical disorder characterized by the occurrence of numerous episodes of sinus inflammation and the presence of accompanying symptoms, imposes a significant burden on both patients and the healthcare system. Frequently, it results in a worse quality of life, frequent consultations with medical professionals, and the administration of many therapeutic interventions to mitigate symptoms and minimize the chances of recurrence. Within the scope of therapeutic methods, antibiotics and topical steroids have traditionally been used as primary interventions. The primary objectives of these therapies are to alleviate symptoms, manage inflammation, and deter the occurrence of further episodes. However, the selection between these two therapy alternatives has continued to be a subject of contention, and there is a deficiency of complete comparison investigations that assess their efficacy and patient contentment. The primary objective of this study is to fill a significant
knowledge gap in the treatment of recurrent sinusitis. This will be achieved by a comprehensive comparative examination of antibiotics and topical steroids, which are considered as key therapeutic agents. The research includes a sample of 175 patients ranging in age from 18 to 65 years who have had recurring sinusitis. The study investigates the effectiveness of various treatment methods in terms of alleviating symptoms, reducing the chances of recurrence, and measuring patient satisfaction. It is crucial to understand the comparative effectiveness and patient preferences about these therapies in order to optimize therapeutic approaches for recurrent sinusitis and improve patient outcomes.

The justification for doing this study is rooted in the need to provide evidence-based guidance to healthcare professionals and individuals grappling with choices pertaining to the most effective course of therapy for recurrent sinusitis. Given the increasing incidence of this condition and the growing strain on healthcare resources, it is crucial to determine the most efficacious and well-tolerated treatment interventions. The primary objective of this study is to enhance the medical community’s comprehension of strategies for enhancing the treatment of recurrent sinusitis. This research effort wants to eventually enhance the safety of patients and minimize the economical consequences associated with this persistent disorder.

METHODOLOGY

The purpose of this study was to assess the effectiveness of antibiotics compared to topical steroids in the treatment of recurrent sinusitis. The research included a sample of 175 patients, who were allocated randomly to one of two experimental groups. Subsequent evaluations were carried out at 4 and 12 weeks after the commencement of therapy. The present study was conducted in the Department of ENT at Hayatabad Medical Complex, spanning from January 2020 to January 2021.

The study design conformed to ethical standards, such as ensuring that informed permission was received from all participants. The research protocol received approval from the Institutional Review Board (IRB). The research comprised patients aged 18 to 65 years who had been diagnosed with recurrent sinusitis based on recognized clinical and radiographic criteria.

Recurrent sinusitis is operationally defined as the occurrence of two or more episodes of sinusitis within a 12-month period. This condition is distinguished by the presence of symptoms including facial discomfort, nasal congestion, purulent nasal discharge, as well as radiographic evidence indicating inflammation of the sinuses. Inclusion in the trial was extended to patients who had a medical background of allergic rhinitis, nasal polyps, or previous sinus surgery. Participants were deemed ineligible for inclusion in the research if they exhibited contraindications to antibiotics or topical steroids, had a medical history of chronic sinusitis lasting longer than 12 weeks, displayed immunodeficiency, had ongoing nasal infections, or had severe comorbidities that could potentially impede the evaluation of treatment outcomes. Furthermore, pregnant or lactating females, persons with a documented hypersensitivity to the medications being studied, and those already undergoing alternative therapies for sinusitis were considered eligible for inclusion in the research.

Data Collection

All participants had baseline data gathered, which included their medical history, clinical examination results, endoscopic evaluations, and radiographic assessments. Validated grading methods were used to determine the severity of the symptoms. According to their group, patients were randomly allocated to either a conventional course of antibiotics or topical steroids. Follow-up evaluations were performed four and twelve weeks after the start of therapy, and data on symptom improvement, recurrence, and patient satisfaction were collected.

Statistical Analysis

To compare the results of the antibiotic and topical steroid groups, statistical analysis was done using acceptable methodologies. Continuous data were reported as means with standard deviations and analysed using t-tests, whilst categorical variables were presented as percentages and analysed with chi-squared tests. Symptom improvement, recurrence rates, and patient satisfaction were the major goals. A p-value of 0.05 or less was judged statistically significant. The study’s findings were analyzed and evaluated in order to reach significant conclusions on the relative efficacy of antibiotics vs topical steroids in the treatment of recurrent sinusitis.
RESULTS

A total of 175 patients were separated into two groups, with 88 receiving antibiotics and 87 receiving topical steroids. Patients in the antibiotics group were 44.2 ± 8.1 years old on average, whereas those in the topical steroids group were 43.9 ± 7.8 years old. Both groups had somewhat more men than females. The majority of patients (81.8% in the antibiotics group and 82.8% in the topical steroids group) were nonsmokers. Comorbidities such as allergic rhinitis, nasal polyps, and prior sinus surgery were present in a modest proportion of both groups of individuals. At 4 weeks, the baseline score in both groups was comparable, with a mean score of 7.2 ± 1.5 in the antibiotics group and 7.4 ± 1.4 in the topical steroids group. Overall, the baseline demographics and clinical features of the two therapy groups were well balanced (Table 1).

The improvement in symptom severity levels in both groups was measured after 4 weeks. In the antibiotics group, 15.9% of patients improved by less than 25%, whereas 42.0% improved by 25-50%. In contrast, only 6.9% of patients in the topical steroids group improved by less than 25%, while 17.2% improved by 25-50%. A larger proportion of patients in the topical steroids group (41.4%) improved by 50-75%, compared to 32.9% in the antibiotics group. The topical steroids group showed the most improvement, with 34.5% of patients seeing more than 75% relief in symptoms, compared to just 9.1% in the antibiotics group. These findings show that topical steroids may be more helpful in reducing symptom intensity in chronic sinusitis patients (Table 2).

Patient satisfaction and recurrence rates in both therapy groups were assessed after 12 weeks. In the antibiotics group, 65.9% of patients were satisfied with their therapy, 26.1% were slightly satisfied, and 7.95% were dissatisfied. In contrast, a larger majority of patients (85.05%) indicated high satisfaction, with just 13.8% expressing moderate pleasure and 1.14% reporting poor satisfaction in the topical steroids group. The topical steroids group also had reduced recurrence rates, with 8.04% of patients having recurrence after 12 weeks, compared to 18.18% in the antibiotics group. These data imply that topical steroids may be more successful not only in reducing symptoms, but also in increasing patient satisfaction and lowering recurrence rates in patients with chronic sinusitis (Table-3).

DISCUSSION

The findings of this study provide insights into the relative efficacy of antibiotics and topical steroids in the treatment of recurrent sinusitis. Recurrent sinusitis is a medical problem that has a significant impact on both the well-being of people and the financial resources of healthcare systems. The results of our study provide significant contributions to the understanding of treatment alternatives and patient contentment, therefore assisting healthcare professionals in enhancing pharmacotherapy for this recurrent condition. One of the principal discoveries of our study is...
investigation is the significant improvement of symptoms found in both cohorts undergoing therapy. Both antibiotics and topical steroids demonstrated efficacy in lowering the intensity of symptoms, as shown by the initial symptom ratings and subsequent improvement. However, the group treated with topical steroids had a faster and more significant decrease in symptoms after four weeks. This finding implies that the use of topical steroids may provide expedited alleviation to those experiencing the pain often associated with recurrent sinusitis. The most notable outcome seen was the disparity in recurrence rates throughout the 12-week follow-up period. The group treated with antibiotics had a rather high incidence of recurrence, amounting to 18.18%. In contrast, the group treated with topical steroids revealed a much lower rate of recurrence, measuring 8.04%. The previous findings suggest that the use of topical steroids may provide more favorable long-term results, hence decreasing the probability of recurrence of sinusitis. Patient satisfaction is a significant indicator of therapy efficiency, and the findings of this research indicate that a much greater proportion of patients in the topical steroids cohort expressed elevated levels of satisfaction (85.05%) in comparison to those in the antibiotics cohort (65.90%). This finding indicates that patients may have a preference for topical steroids because of their higher efficacy and most likely reduced rates of recurrence. The research findings have significant clinical consequences. This statement underscores the need of promptly addressing and proactively preventing recurrent sinusitis in its treatment. It is important for clinicians to carefully evaluate the prospective advantages of using topical steroids, not alone for the purpose of alleviating symptoms, but also for diminishing the chance of recurrence and increasing patient satisfaction. The results of this study have the potential to bring about a change in clinical practice, with a preference for the use of topical steroids as a therapy approach that is more efficacious for recurrent sinusitis.

**Limitations**

Several limitations should be considered in this investigation. First, the 12-week trial may not reflect treatment’s long-term effects. Recurrence rates may be better understood with longer follow-ups. The research also excluded physicians’ alternative treatment methods and combinations, focusing only on antibiotics and topical steroids. The research also did not examine treatment side effects or tolerance. The outcomes may also depend on the patient group and may not apply to all recurrent sinusitis situations.

**CONCLUSION**

While both antibiotics and topical steroids give symptom relief, topical steroids produce quicker and more persistent reduction in symptoms, a lower recurrence rate, and greater patient satisfaction. These findings highlight the potential benefits of topical steroids in the treatment of recurrent sinusitis and highlight the need for more research and clinical recommendations to optimize the therapeutic strategy for this difficult disease.

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**REFERENCES**


