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A RADOMIZED STUDY ON PROPHYLACTIC ANTIBIOTICS IN MAXILLOFACIAL SURGERY

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ABSTRACT-

The use of antibiotics is essential in maxillofacial surgery. In this study, 100 patients from the oral and maxillofacial surgery department at Sree Balaji Dental College and Hospital were recruited throughout the 2018 academic year. There were two sample sizes: group A, which included 50 patients who had prophylactic antibiotic coverage following the procedure, and group B, which included 50 patients but did not receive prophylactic antibiotic coverage. Following the operation, the patient was instructed to take amoxicillin in this case of clindamycin.

Keywords-

Antibiotic prophylaxis, amoxicillin, clindamycin, surgical management

Material and Methods-

In this study randomized study was done in 100 patients. Sample size group-A with prophylactic antibiotic and group- B without antibiotic prophylactic after the surgical procedure was taken under consideration. The prophylactic antibiotic coverage administered was amoxicillin and clindamycin for a duration of 4 to 5 days after the surgical procedure.

Results-

The antibiotic coverage shows good result in maxillofacial procedure. Group-A patient showed to have better result when compared to group-B patients.

Introduction-

The surgical intervention of bacteria present in blood plays a vital role to overcome postoperative complication, and therapeutic antibiotic coverage such as hard and soft tissue inflammation plays a key role.

The administered antibiotic should have a broad-spectrum antibiotic against pathogens. The key issue is maintaining the ratio between minimal inhibitory and peak concentrations. The spread of secondary infection must be prevented with proper antibiotic coverage. The dosage of antibiotics is necessary to avoidhospital-acquired bacteremia. The recommendation concerning the use of antibioticsin post-op infection of maxillofacial surgery procedures in similar circumstances it appears to be reasonable to set the applicable standard for prophylactic coverageto prevent pain and swelling after each surgical procedure.

Discussion

The emergence of a new, potent medication is genuinely restricted by the presence of the multidrug-resistant antibacterial drug. If a medication against multidrug-resistant or hospital-acquired infections isn't developed soon, we will soon be living in a post-antibiotic era [7,8,9]. The percentages of susceptibility for the 98 species were penicillin v: (85%), (91%); amoxicillin + clavulanic acid: (100%); and clindamycin: (96%), according to BAUMGARTNER and XIA, from the USA, who evaluated antibiotic resistance [11]. Penicillin v: 40%, amoxicillin + clavulanic acid 70%, and clindamycin 40% were the outcomes we were able to achieve. Streptococcus viridans was the most frequently isolated bacterium from head and neck space infections of odontogenic origin, according to REGA et al. [13,14,15]. Seventy percent of the bacteria were determined to be gram-positive. WALIA et al. from India state that Escherichia coli, Klebsiella, and Staphylococcus aureusand peptostreptococcus [13]. According to the subject's literature, endocarditis, sepsis, and urinary tract infections are caused by vancmycin-resistant enteococcus strains. The most recent antibiotic, linezolid, does not work to treat infections caused by continuous proliferation vre, multidrug-resistant pseudomonas aeruginosa, escherichia coli esbl, and klebsiella pneumoniae esbl. Tan et al measured the frequency of bleeding, oedema, and pain throughout the two weeks following treatment. Comparative studies conducted on our patient group's outcomes indicate that the use of antibiotics as a preventative measure after surgery affects both the course of therapy and the incidence of problems following surgery[16,17, 18]. Per SCHAEFER and CATERSON of Boston, a retrospective analysis of less than 100 patients with mandibular fractures treated with osteosynthesis was carried out. They contrasted how well ampicillin with antibiotics worked as a preventative measure.They contrasted the efficacy of

clindamycin versus ampicillin plus sulbactam in antibiotic prophylaxis. Antibiotics are recommended for elderly individuals with systemic diseases as well as for previous fractures that are made worse by persistent inflammation[20,21]. About 15–30% of paediatric instances of acute pharyngitis are believed to be caused by the bacteria Group Aβ-haemolytic streptococcus pyogenes in healthy individuals. Numerous complications when the bacteria is the etiological cause are mentioned in the literature. The dental surgery patients in the current study received the antibiotic with or without. As a preventative measure, the patients received antibiotics for a mean of 4 days following surgery and for a total of 4-5 days. Patients who had heart anomalies were at a higher risk of contracting infectious endocarditis.This study has limitations because it only covers a limited and isolated location and has a tiny sample size. Prophylactic antibiotic use is advised for patients with uncontrolled co-morbidities or poor oral health; Antibiotics decreased the risk of infection when compared to treatment without prophylaxis, according to a comprehensive analysis by the Cochrane Collaboration on the use of antibiotics for infection prophylaxis following tooth extractions or implant implantation.Consequently, the study's conclusion that antibiotics can prevent dental implant failure is supported[23,24,25]. Specifically, one hour prior to the treatment, taking 2 or 3 grammes of amoxicillin or clindamycin orally as a single dosage is advantageous.

Conclusions

The majority of the patient under prophylactic antibiotic dosageshows good result. Isolated bacteria were streptococcus mitis and streptococcus oralis, whose number has grown over the last two years. Empiric therapies in the future should be based on ciprofloxacin and gentamicin.only 9% of antibiotic prescribing for infection prophylaxis was appropriate based on currently available evidence. Postprocedure antibiotic prescribing for implants and extractions to only 1 dose prior to the procedure could significantly increase the therapeutic effect. Guidelines for the prevention of infective endocarditis and prosthetic joint infections should be revised and to be followed worldwide.

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