

PROPHYLACTIC ANTIBIOTIC USE IN ORAL & MAXILLOFACIAL SURGERY

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Abstract:

AIM: - This study is carried out to assess the role of antibiotic prophylaxis in the field of Oral & Maxillofacial surgery.

Material & Methods: - it is multi centric study. 30 patients between the age group of 10 to 65 years, 20 Males and 10 Females where included in this study. Out of 30 patients 18 patients were included in group 1- prophylactic antibiotic group and remaining 12 patients were included in group 2- Non antibiotic group. Group 1 patients were given injection augmenting 1.2gm (Amoxicillin + Clavulanic acid) intravenously. Half an hour before surgery of these 30 patients, 16 underwent surgery under general anesthesia and remaining 14 patients underwent surgery under local anesthesia.

Results: 2 patients from group 1 suffered post surgical infection leading to infection 11.1% and in group 3 patients develop post surgical infection leading to an infection rate of 21.4%.

Conclusion: The finding in this study suggests that antibiotic prophylaxis has definitive role to control the post surgical infection in Oral & Maxillofacial surgical procedures.

Keywords: Antibiotics, Prophylaxis, Post- Surgical infection.

Introduction:

The Maxillofacial region is one of the most vascular area of the body. These leads to profuse bleeding from the whom in this area but simultaneously healing is thought to be better due to same region most of the procedure in Oral & Maxillofacial surgery fall under the clean contaminated group^{1,2} hence we have decided to evaluate the need of prophylactic antibiotic in preventing post surgical infections in Oral & Maxillofacial procedures.

Principles of antibiotic prophylaxis:

- Benefits from prophylaxis outweigh the risks of antibiotic-related allergy, toxicity, super infection and the development of drug-resistant microbial strains.
- An antibiotic loading dose should be used.
- The antibiotic should be selected based on the organism most likely to cause an infection.
- Before spread of micro organisms, the antibiotic should be present in the

blood and target tissue.

- Antibiotic prophylaxis should be continued as long as contamination from the operative site persists.

Aims & Objectives:

The aim of this study is to evaluate the benefit of pre-operative antibiotic prophylaxis to prevent post surgical infection in field of Oral & Maxillofacial procedures.

Material & Methods:

A prospective study was carried out on 30 patients, 20 Males and 10 Females. A total of 30 patients under one surgery, out of which 16 patients underwent surgery under general anesthesia and remaining 14 patients were operated under local anesthesia. Patients were divided in group 1 – Antibiotic group (N=18) Group 2- Non antibiotic group (N=12). Of the 30 patients included in the study 18 were given prophylactic dose of injection of augmenting 1.2 gram I.V. state half an hour before maxillofacial surgical procedures & were included group 1. All the patients were having posttraumatic maxillofacial injuries like fracture mandible and fracture maxilla etc. The remaining 12 patients were not given any type of antibiotic before or after surgery and they were included in group-2 non antibiotic group. Mini plates were used for all the trauma cases.

Results:

In group-1, 2 patients suffered from post surgical infections leading to infection rate of 11.1% and group-2, 3 had. Post surgical infection leading to infection rate of 21.4%. The mean day of occurrence of infection was 4.7 days ranging from 3rd to 10th post operative day?

Discussion:

Ever since the advent of antibiotics they are considered the useful weapon to treat the infections by surgeons and physicians but at the same time prophylactic antibiotic use has come under the scrutiny recent times, especially against the background of the threat of emergence of resistant micro organism³ .

The use of prophylactic antibiotics for various Oral & Maxillofacial surgical procedures is well documented in literature^{4,5,6,7}. But the real question to be answered is “Whether the prophylactic antibiotic itself is needed for Oral & Maxillofacial surgeries or not.”

In our study, the infection rate in Group-2 is 21.4% , which is quite high in comparison to group-1 infection rate of 11.1%, which suggest that the use of prophylactic antibiotics in maxillofacial surgical procedures play a vital role to prevent the post surgical infections.

In the literature many studies^{8,9}. Have shown that compound fractures involving the teeth have more chances of infection than the others. About the surgery performed all the trauma case in this study ORIF with mini plates was carried out.

Conclusion

This study suggests that prophylactic antibiotic therapy may after the incidence of post surgical wound infection. In Oral & Maxillofacial surgical procedures

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