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ANTIBIOTIC PROPHYLAXIS AND POSTOPERATIVE COMPLICATIONS AFTER IMPACTED THIRD MOLAR SURGERY

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INTRODUCTION

The use of routine antibiotic therapy in patients undergoing surgical third molar extraction is controversial. Some authors are of the opinion that the incidence of post-operative infections in third molar surgery, between 1 to 5 % is too low to justify a routine antibiotic therapy.

The indiscriminate use of such therapy can results in adverse outcomes such is development of resistant microbial organisms and allergic reactions.

AIM of this study was to evaluate the influence of antibiotic prophylaxis on postoperative complications such as fever, manifest swelling, pain and alveolar osteitis, after inferior third molar removal in young patients.

MATERIAL AND METHOD

The efficacy of antibiotic therapy in preventing postoperative complications following surgical third molar extractions was evaluated in 50 medically healthy patients.

In the test group (25 patients), the protocol utilized a regimen of 2 g of amoxicillin orally daily for 5 d postoperatively, starting at the completion of surgery.

In the control group (25 patients), no antibiotic therapy was given.

Prior to surgery, all patients were subjected to professional tooth cleaning to remove calculus and plaque deposits if present.

RESULTS

The mean operating time was 34 minutes in the control group and 31 minutes in the test group (this difference was not significant). The surgical procedure and technique was standardized using triangular shaped intrasulcular mucoperiostal flap with a lateral releasing incision. Each patient quantified the degree and intensity of surgical pain and discomfort on a 10 cm horizontal visual analogue scale (the end points – no pain, and 9, 10 – unbearable pain) three times: following the extraction, 6h postoperatively and in the following 6 days.

impacted third molar surgery	Test group (AB) N=25	Control group N=25	Total N=50
male	14	13	27
female	11	12	23
age	22±8	24±6	23±7
smokers	8	7	15
alcohol consumpsion	5	6	11
extraction difficulty	4	8	12
pain	5	7	12
fever	3	9	12
swelling	2	4	6
alveolar osteitis	4	5	9

Relative risk (R.R) for pain, fever, swelling and demografic variable (smoking habits, alcohol consumption and sex)
- only significant coeficients are reported -

pain	R.R.	p-value	R
sex	8.375	0.0297	0.188
smoking	8.981	0.0232	0.202
alcohol	9.240	0.0018	0.315
fever			
smoking	7.686	0.0353	0.1720
alcohol	10.210	0.0029	0.2896
swelling			
sex		11.192	0.0295

No significant difference was found between the test group and the control group in the incidence of postoperative parameters , i.e. fever, pain, swelling and alveolar osteitis.

A statistically significant association between smoking, habitual drinking and increased postoperative pain and fever was found.

Patient age ≤ 18 years was positively correlated with an increased incidence of alveolar osteitis. Swelling was found to be gender-related, in that female patients experienced more swelling than male patients.

No correlation was found between the time required for surgery or difficulty of extraction and post-operative pain.

CONCLUSION

No difference was found between patients receiving postoperative amoxicillin and the control group in the incidence of postoperative parametres. Another important finding was the statistically minor consumption of analgesics in the test group in the postoperative period.