MINIMIZING ANTIBIOTICS USE IN POST-OPERATIVE CARE OF PEDIATRIC PATIENTS HOSPITALIZED WITH ODONTOGENIC INFECTION

Michael V. Joachim*[1,3], Daniel Glikman[2,3], Kutaiba Alkeesh[1], Murad Abdelraziq[1], Imad Abu El-Naaj[1,3]

[1]Department of Oral and Maxillofacial Surgery and [2]Unit of Infectious Diseases, the Baruch Padeh Medical Center, Poriya, Israel

[3]Azrieli Faculty of Medicine, Bar-Ilan University, Safed, Israel

Background: Overuse of antibiotics is a global medical concern with possible devastating consequences. The current standard of care indicates post-operative course of antibiotics for children treated for odontogenic infections. However, there are reports questioning the use of antibiotics.

Aim: To compare treatment outcome of children treated with post-operative antibiotics to children that were not treated with antibiotics after surgical intervention.

Methods: Data were collected retrospectively from the records of patients (age<15) hospitalized due to odontogenic infections in Baruch Padeh Medical Center, during two periods of time: 1/2010-12/2015 – with postoperative course of antibiotics and 11/2018-12/2019 – after a change of policy of single peri-operative dose and no post-operative antibiotics. The measured outcome was Length of Stay (LOS) as a clinical measure of resolution of abscess.

Results: A total of 411 patients were included in the antibiotics (control) group, while 111 patients were in the non-antibiotics (study) group. All but 4 of the patients in the study group showed spontaneous resolution of their condition post-operatively

		Study	Control	p value	test
Age (years)	Mean	6.03	6.52	0.07	t test
	SD	2.26	2.6		
WBC (*10^6/mL)	Mean	10.8	11.69	0.09	
	SD	3.59	3.42		
Sex	M	54.95%	58.39%	0.52	Fischer's exact test
	F	45.05%	41.61%		

Table 1: Comparison of demographic and clinical characteristics of the study and control group shows no significant statistical difference between the groups. (SD – Standart deviation, WBC – White Blood Count)

Table 2: Comparison of treatment outcome between the study and control group shows no significant statistical difference. (LOS – Length of stay, SD – Standard deviation)

		Study	Control	p value	test
LOS (days)	Mean	1.67	1.7	0.76	t test
	SD	0.9	0.91		
LOS	1-2 days	90.99%	87.10%	0.32	Fischer's exact test
	≥3 days	9.01%	12.90%		

Conclusion: The study and control groups had similar favorable outcome suggesting that post-operative antibiotics are not needed in children with odontogenic infections treated surgically.

Bibliography:

Bertossi S, et al. Odontogenic orofacial infections. J Craniofac Surg. 2017;28(1):197-202.

Dodson TB, et al. Pediatric maxillofacial infections: A retrospective study of 113 patients. J Oral Maxillofac Surg. 1989;47(4):327-330

*Contact e-mail: michael.joachim@biu.ac.il

The authors declare no conflict of interests