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Antibiotic Resistance in Severe Orofacial Infections

Purpose: This study assessed the antibiotic resistance profile in patients with severe orofacial infections treated at a single institution from 2009 through 2014. Factors contributing to resistance were studied. The resistance profile was compared with that of a cohort of similar patients treated a decade previously to identify change in antibiotic resistance. In addition, the effect of antibiotic resistance on in-hospital course was studied.

Materials and

Methods: This was a 5-year retrospective cohort study. Patients were identified through the oral and maxillofacial surgery data registry. Inclusion criteria were patients treated for orofacial infection requiring hospital admission, surgical drainage, and availability of complete medical, surgical, and microbiological data.

Patients with incomplete data or treated as outpatients or nonsurgically were excluded. Sixty patients charts were identified for review. Demographic data; medical, dental, and surgical histories; and hospital course and treatment specifics were obtained for each patient. Linear regression and logistic analyses were used to analyze the data.

Results: Men composed 60% of the cohort (mean age, 45yr). Average hospital stay was 5.5 days. Penicillin resistance was found in 32.5% of aerobic isolates and clindamycin resistance was found in 29.3%. *Streptococcus viridians* and *Staphylococcus* species showed increased resistance to clindamycin and erythromycin compared with historic controls. Younger patient age, surgical history, and number of cultured aerobes showed a

relevant correlation to antibiotic resistance. The need for changes in antibiotics, repeat surgical drainage, and increased serum urea nitrogen levels correlated with longer hospital stay.

Conclusion: A serious increase in clindamycin and erythromycin resistance was found for *S viridians* and *Staphylococcus* species. Age, surgical history, and number of cultured aerobes showed a statistically meaningful correlation to antibiotic resistance. Presence of antibiotic resistance failed to show statistically relevant correlations to prolongation of hospital stay. Rather, the

need for change in antibiotic regimen, the need for re-drainage, and increased serum urea nitrogen level were associated with longer hospital stay.

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Check out this interesting short video on "The Evolution of Bacteria"

<https://www.youtube.com/watch?v=pIVk4NVIUh8&feature=youtu.be>

DENTAL FUN FACT

DID YOU KNOW...

SAY CHEESE! THE CALCIUM AND PHOSPHOROUS FOUND IN CHEESE IS HEALTHY FOR YOUR TEETH. IT REDUCES THE PH LEVEL IN PLAQUE AND RE-MINERALIZES THE ENAMEL.

(<http://www.obteam.com/Fun-Facts.aspx>)

NEWS YOU CAN USE

Every day in the United States, 60 people die from an opioid overdose, 44 from prescriptions written by doctors, and 16 from heroin use. The United States accounts for approximately 5% of the world's population but sustains 80% of the world's oxycodone consumption.

Oral and maxillofacial surgeons are responsible for managing odontogenic pain, infection, and postoperative and postsurgical pain. Overall, they prescribe 8 to 12% (6.4 million prescriptions) of opioid analgesics in the United States. They also are the number 2 prescribers behind primary care physicians to patients younger than 30 and the number 1 prescribers to those younger than 19.

By Medscape and FDA, Thursday, April 20, 2017

Dr. Brian Simpson
announces the thirty first meeting of the
NANUET IMPLANT STUDY GROUP

Speaker: Brian F. Bovino, DMD
Director of the Oral Surgery Residency Program
St Luke's/Roosevelt Hospital

“Odontogenic Infections”

Thursday, September 14, 2017
Dinner: 6:30 Presentation: 7:00 — 9:00 pm

Hudson House 134 Main Street Nyack, NY

2 CE credits awarded by the Ninth District Dental Association
Cost: \$50.00

To register, please call: 845-623-3497
or email office@drbriansimpson.com

“We live in a rainbow of chaos.”
-Paul Cezanne