Risk Factors for Endogenous Endophthalmitis (EE) in Hospitalized Patients with Candida Fungemia

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Introduction

• Endogenous Endophthalmitis (EE) is a potentially devastating intraocular infection that is due to metastatic seeding of the eye by bacteria from a different bodily source.
• Treatment for EE involves intravenous antibiotics (I), intravitreal antibiotics (Center), and pars plana vitrectomy (R).
• The objective of this project is to identify and describe risk factors for EE in hospitalized inpatients with Candida fungemia.

Methods and Materials

• Retrospective, cross-sectional study of the 2002-2014 National Inpatient Sample (NIS) Database.
• Codes from the International Classification of Diseases, Ninth Revision (ICD-9 codes) were used to identify cases of endogenous endophthalmitis, systemic comorbidities, and procedures performed on patients.
• Chi square analysis and independent samples t-testing were used to compare categorical and numerical variables between Candidemic patients with and without endophthalmitis; statistics were performed with IBM SPSS

General Results

• We identified 98,783 cases of candida fungemia, 529 (0.5%) of which had concurrent EE during the hospitalization.
• The average age of patients with EE was 54.6 years (range: 0-95) vs. 58.2 years (range: 0-105) in those who did not (p < 0.001).
• The average length of stay was 22.89 days in Candidemic patients without EE and 19.52 days in candidemia patients with EE (p < 0.001).
• The percentage of patients who died during admission was significantly lower in the EE group (2.8% vs 15.6%; p < 0.001).
• The average cost per day of hospitalization was not significantly different between Candidemic with EE vs. those without EE ($7,182.82 vs. $7,510.60; p = 0.175).

Results

Comparison of Patients with Fungemia only vs. Fungemia + Endogenous Endophthalmitis

Conclusions

• In this study, the prevalence of EE in Candidemic patients was low at 0.5%.
• The greatest risk factors for EE were active/history of radiation therapy, Native American ethnicity, steroid use, and IV drug use.
• Patients with a history of chronic kidney disease and recent intubation were less likely to develop EE.

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• Aditya Uppuluri has no financial disclosures.
• Marco A. Zarbin is a consultant for Genentech/Roche, Novartis Pharma AG, Frequency Therapeutics, Iveric Bio, Ophthotech, and Healios KK. He is a stockholder for Frequency Therapeutics, Iveric Bio, and NVasc. He is a speaker for Iridex. He is Co-Founder of NVasc.
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