

# Chapter 11

## INFECTIVE ENDOCARDITIS

Şafak ÖZER BALIN<sup>1</sup>

Mehmet BALIN<sup>2</sup>

### INTRODUCTION

Infective endocarditis (IE) is an infectious disease caused by bacteria that usually affects the endocardial surface of the heart. (Contrepolis, 1996). IE is still an important disease because of its difficulty in diagnosis and treatment and high morbidity and mortality (Fowler, Scheld & Bayer, 2015). In recent years, there have been important changes in the epidemiology and physiopathology of endocarditis. Patients with this disease need a multidisciplinary approach by the endocarditis team including the infectious diseases specialist, cardiologist, cardiovascular surgeon and radiologist (Cahill & Prendergast, 2016).

### EPIDEMIOLOGY

Infective endocarditis is a life-threatening disease. The annual incidence of IE in the adult population varies between 3-9 / 100 thousand cases (Correa de Sa & et al., 2010), (Sy & Kritharides, 2010). Even with the best treatment option, death rates are approximately 25% (Murdoch & et al., 2009). Many heart diseases can predispose to IE. Rheumatic heart disease remains the main risk factor for IE in low-income countries (Carapetis & et al., 2005), (Marijon & et al., 2007). In high-income countries, while the prevalence of rheumatic heart disease has decreased, degenerative valvular disease, diabetes, cancer and congenital heart disease started to become major risk factors for IE (Seckeler & Hoke, 2011).

### ETIOLOGY

The IE factors differ according to the risk factors related to the patient. Although Streptococci and staphylococci is responsible for 80% of IE cases, the proportion of these two microorganisms has changed over time (Murdoch & et al., 2009). IE associated with health services was caused by *Staphylococcus au-*

<sup>1</sup> Assistant Professor, Firat University, Department of Infection Disease, safakozerbalin@hotmail.com

<sup>2</sup> Associate Professor, Firat University, Department of Cardiology, mbalina@firat.edu.tr

## ANTIMICROBIAL PROPHYLAXIS

IE is not common after dental or other interventional procedures (Baddour & et al., 2005). Therefore, the use of antimicrobial prophylaxis in American and European guidelines suggests only for cardiac patients with high IE risk (Popp, 1990), (Habib & et al., 2015). In the UK, prophylaxis has been completely abandoned (Richey, Wray & Stokes, 2008). The riskiest cardiac conditions for IE are IE story, the presence of prosthetic valves, cyanotic congenital heart diseases, operated congenital heart diseases with residual defect remained, and the first six months of congenital heart disease with no residual defect. In these patients, prophylaxis with 2 g amoxicillin / ampicillin or 600 mg clindamycin (allergic to penicillin / ampicillin) is recommended in dental procedures involving oral mucosal perforation or periapical region of the gingival tissue or tooth (Habib & et al., 2015).

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