

Infective endocarditis in Turkey: changing trends in epidemiology

To the Editor,

We read with a great interest the article by Elbey et al. (1) that was published in September issue of The Anatolian Journal of Cardiology 2013; 13: 523-7. In this multicenter study, the authors evaluated the epidemiologic factors that contribute infective endocarditis (IE) along with the clinical and echocardiographic characteristics of the patients. They concluded that the main predisposing factor was rheumatic heart disease, patients were younger in contrast to western countries, staphylococci species were the major pathogens and in-hospital mortality rates were still high.

The exclusive feature of this study was the multicenter participation. The previous researches of IE conducted in Turkish population were prominently single center studies (2-4). Although Leblebicioğlu et al. (4) published a multicenter study previously; they enrolled fewer subjects.

In our opinion, the most common predisposing factor should have been interpreted as prosthetic valve instead of rheumatic heart disease according to given results (30% vs. 28%). Comparing to previous multicenter study by Leblebicioğlu et al. (4), the incidence of prosthetic valve endocarditis was increased substantially (30% vs. 17%). According to the data from a single center in Turkey, the rate of prosthetic valve involvement was as higher as 44% (2). In the present study, there were 15 cases of device related endocarditis. The increasing frequency of these newer etiologic factors may have altered the distribution of the causative microbiological agents; leading a decline in streptococci infection and increase in enterococci species.

Apart from traditional predisposing conditions, up-to-date etiologic factors such as intravenous drug use, immunosuppressive disorders, hemodialysis or the presence of intravascular catheters should also have been evaluated. Despite their increasing prevalence in the western countries, the data are scarce about the rates of these predisposing factors in Turkish population.

As stated in the limitation part, the use of transesophageal echocardiography seems lower. Given the higher rates of congestive heart failure (33%) and severe symptoms (NYHA 3/4: 51%) in the patient population; the mechanic complications may have been overlooked. Based on its superior abilities in diagnose and follow-up -especially in detecting mechanic complications and measuring vegetation size-, the current guidelines recommend the use of transesophageal echocardiography even in the setting of positive transthoracic echocardiography (5).

The rates of negative blood culture still remain higher. The modified Duke criteria is mainly based on blood culture results; thus negative blood culture causes delays in diagnosis and may lead inappropriate treatments. As specified in the discussion part, in most of the cases, the possible reason of this finding would be commencing antibiotics before obtaining blood cultures. The predisposing patients should be informed and the clinicians should be educated about the importance of the blood cultures in order to diagnose and to manage IE with the use of appropriate antibiotics.

In conclusion, this article provides an update about the recent status of IE in Turkey. Though it is beyond the scope of the present study, we want to emphasize the need of a larger multicenter trial to figure out long-term mortality rates of IE in Turkish population.

Esra Gücük İpek, Yeşim Güray¹, Ümit Güray²
Clinic of Cardiology, Polatlı Hospital; Ankara-Turkey

¹Clinic of Cardiology, Yüksek İhtisas Education and Research Hospital; Ankara-Turkey

²Clinic of Cardiology, Numune Education and Research Hospital; Ankara-Turkey

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Address for Correspondence: Dr. Esra Gücük İpek,

Gülbeng Sitesi G Blok No: 21, 06820

Yaşamkent, Ankara-Türkiye

Phone: +90 505 895 64 16

Fax: +90 312 621 35 03

E-mail: esragucuk@hotmail.com

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Author's Reply

To the Editor,

We thank your comments on our infective endocarditis study published in September issue of The Anatolian Journal of Cardiology 2013; 13: 523-7 (1). In this multicenter study, we evaluated the clinical manifestations, microbiological profile, echocardiographic findings and management strategies of infective endocarditis patients in Turkey.

The most common predisposing factors were prosthetic valve endocarditis and rheumatic valvular disease (30% and 28%, respectively).

In previous studies, staphylococci and streptococci were the most commonly isolated causative agents of IE. These two microorganisms have been reported as main etiological agents in the cases with native valve endocarditis (2). However, in our study cohort, enterococci and streptococci were isolated causative agents in IE with the incidences of 11% and 11%, respectively. Then, initiating empiric therapy should be considered. The rate of enterococci infection was among the highest when compared with the literature data (3-20%) (3). But in our study mortality of enterococcal endocarditis was highest compared with other agents (46%).

A limitation of this study is, the use of transesophageal echocardiography seems lower (37%). And another limitation of this study is retrospective.

In conclusion, despite advances in diagnosis and treatment, infective endocarditis is still associated with mortality rates. These interrelations need to be clarified with further studies in Turkey.

Mehmet Ali Elbey
Department of Cardiology, Faculty of Medicine, Dicle University;
Diyarbakır-Turkey

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Address for Correspondence: Dr. Mehmet Ali Elbey,
Dicle Üniversitesi Tıp Fakültesi, Kardiyoloji Anabilim Dalı;
21280 Diyarbakır-Türkiye
Phone: +90 412 248 80 01
Fax: +90 412 248 85 23
E-mail: elbeymali@hotmail.com
Available Online Date: 19.03.2014

Elevated mean pulmonary artery pressure in patients with mild-to-moderate mitral stenosis: a useful predictor of worsening renal functions?

To the Editor,

We read the article entitled "Elevated mean pulmonary artery pressure in patients with mild-to-moderate mitral stenosis: a useful predictor of worsening renal functions?" by Zorkun et al. (1) published in August issue of *The Anatolian Journal of Cardiology* 2013; 13: 457-64 with interest. They concluded that elevated mean pulmonary artery pressure at the time of initial evaluation, in patients with the mild -to-moderate mitral stenosis, might help to predict worsening renal function. Frankly, we appreciate the authors for their informative and original study. However, we have some criticism about this study.

As mentioned by authors, Heywood et al. (2) found no association between renal dysfunction and left ventricular systolic dysfunction in patients with acute heart failure. They also concluded that renal failure might be more closely associated with diastolic dysfunction. Because it was preserved, Zorkun et al.(1) overlooked the right ventricular systolic function but there were no significant differences in diastolic function between the two groups.

In a study, Bilen et al. (3) demonstrated that patients with mitral stenosis had lower left ventricle functions using 2D strain imaging, and this was independent of the hemodynamic severity of mitral stenosis.

The authors cite experimental studies of renal venous congestion to consolidate for their conclusion, but the directionality of their results appears to be discordant with the cited models. Furthermore, relief of

venous congestion leads to a prompt and reproducible improvement in renal function. The authors did not explain how they measured or established venous congestion. In the Evaluation Study of Congestive Heart Failure and Pulmonary Artery Catheterization Effectiveness (ESCAPE) trial, Nohria et al. (4) found a lack of association between worsening renal function and baseline, or changes in hemodynamic parameters including right atrial pressure.

Central venous pressure (CVP) is an important and easy to use cardiac parameter. There is good evidence from experimental data that, apart from decreased renal blood flow, an increase in CVP in the context of significant right ventricular dysfunction or tricuspid regurgitation may lead to decreased renal perfusion by elevation of renal venous pressure. In the isolated perfused rat kidney, an increase in CVP has been shown to be followed by a significant reduction in glomerular filtration rate, sodium excretion, and fractional excretion of sodium, which resolved after restoration of normal CVP levels (5).

In the Zorkun et al.'s (1) study, there are insufficient patients with comorbidities that contribute to intrinsic renal disease in the patients with worsening renal function on follow up group. So, we think that this is a selection bias.

Yavuzer Koza, Ziya Şimşek, Muhammed Hakan Taş
Department of Cardiology, Faculty of Medicine, Atatürk University;
Erzurum-Turkey

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Address for Correspondence: Dr. Yavuzer Koza,
Atatürk Üniversitesi Tıp Fakültesi, Kardiyoloji Anabilim Dalı,
Yakutiye; 25100 Erzurum-Türkiye
Phone: +90 442 231 85 03
Fax: +90 442 236 13 01
E-mail: yavuzerkoza@hotmail.com
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Author's Reply

To the Editor,

We thank to authors for their valuable comments, appreciate their interest to our study titled "Elevated mean pulmonary artery pressure in patients with mild-to moderate mitral stenosis: a useful predictor of worsening renal functions?" published in August issue of *The Anatolian Journal of Cardiology* 2013; 13: 457-64 (1).