

# STUDY OF HEALTH CARE RELATED INFECTIVE ENDOCARDITIS: ASSESSMENT OF CLINICAL CRITERIA AND PATIENTS OUTCOMES

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## INTRODUCTION

Health care related infective endocarditis (HCRIE) is now becoming one of the most important causes of prolonged fever of unknown etiology. The increased incidence of HCRIE is mainly due to the increased awareness of doctors and other health care providers about such conditions. Meanwhile, incidence of surgical interventions is rapidly increasing. It was found that infective endocarditis which is related to health care services constitutes up to 10-34% of total IE cases. Study of etiological factors, mode of presentation and course of the disease will ultimately reduce the mortality rate. HCRIE can be acute usually as a part of general septicemia or lone, isolated subacute infective endocarditis.

## AIM OF THE WORK

The aim of the study was to register cases of healthcare-related infective endocarditis presented to Alexandria main University Hospital and identify their common risk factors, clinical characteristics and outcomes.

## SUBJECTS AND METHODS

Our study prospectively enrolled 52 patients with HCRIE. All patients were subjected to detailed history taking, clinical examination, resting electrocardiography (ECG), echocardiography and several laboratory investigations.

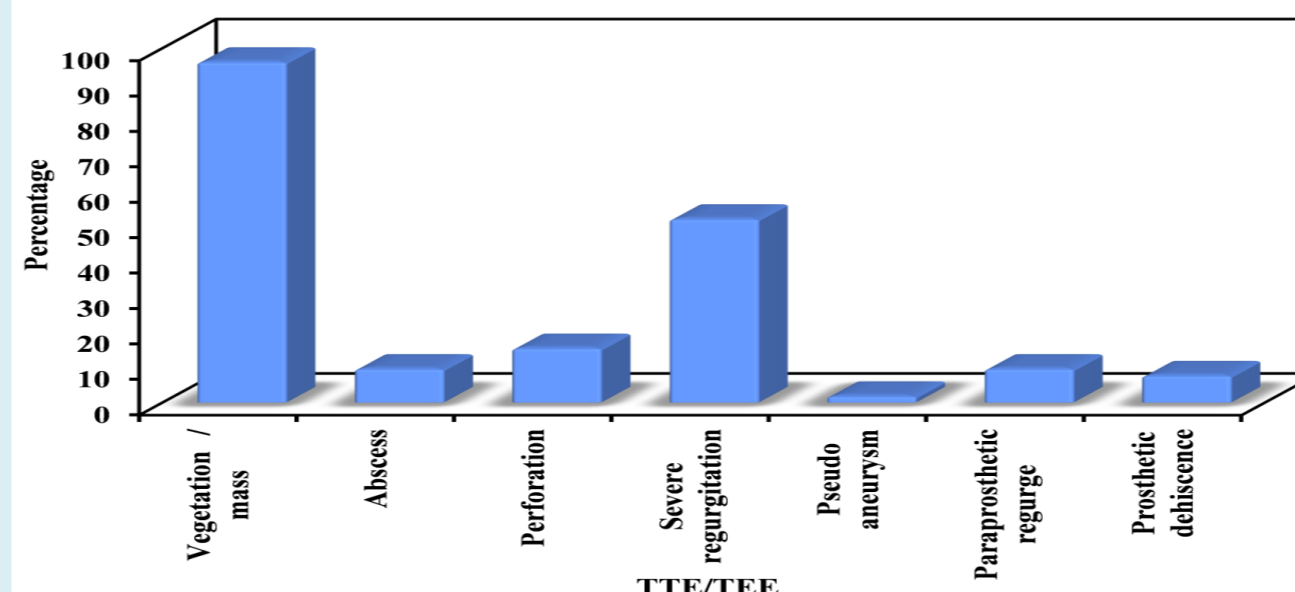
## RESULTS

**Table (1): Distribution of the studied cases according to predisposing cardiac condition.**

Predisposing cardiac condition	No.	%
RHD	4	7.7
CHD	4	7.6
Tetralogy of Fallot (repaired)	1	1.9
Bicuspid Aortic Valve	1	1.9
PFO	1	1.9
Pulmonary stenosis	1	1.9
Prior IE episode	2	3.8
Implantation of cardiac device	9	17.3
Pacemaker	8	15.4
CRT-P	1	1.9
Valve replacement	12	23.1
Double (Mitral &Aortic)	6	11.5
Mitral	3	5.8
Aortic	1	1.9
Mechanical (Mitral &Aortic)		
Tricuspid bioprosthesis	2	3.8
Patients without predisposing cardiac condition	21	40.4

**Table (2): Distribution of the studied cases according to blood culture results.**

Laboratory investigations	No.	%
<b>Blood culture</b>		
<b>Negative</b>	30	57.7
<b>Positive</b>	22	42.3
<b>Candida</b>	1	1.9
<b>E-coli</b>	1	1.9
<b>Enterococcus</b>	6	11.5
<b>Klebsiella</b>	1	1.9
<b>Methi-S Staph Aureus</b>	1	1.9
<b>MRSA</b>	6	11.5
<b>Pseudomonas aeruginosa</b>	2	3.8
<b>Staph xylosus</b>	1	1.9
<b>Strept Viridans spp</b>	3	5.8



**Figure (1): Distribution of the studied cases according to TTE/TEE findings.**

**Table (3): Distribution of the studied cases according to patients outcomes.**

Patients outcomes	No.	%
Died	21	40.4
Cause of death (n=21)		
-Septic shock	10	47.6
-Cardiogenic shock	4	19
-Arrythmias	3	14.3
-Pulmonary embolism	3	14.3
-Stroke	1	4.8
Cured	25	48.1
Referred to another hospital	6	11.5

**Table (4): Distribution of cured patients according to complications (n=25)**

Complications	No.	%
Embolic events	12	48
Site (n = 12)		
Pulmonary	5	41.6
Peripheral	3	25
Splenic	2	16.7
Cerebral	2	16.7
CHF	4	16
AKI	4	16
A-V block	3	12
Thrombocytopenia	3	12
Increase vegetation/abscess size	2	8

## CONCLUSION

In our study, HCRIE was associated with high mortality rate, caused by more aggressive microorganisms with high prevalence of negative blood cultures due to prior administration of antibiotics. Health care providers should always suspect HCRIE in patients with prolonged fever of unknown etiology specially if they were subjected recently to any invasive procedure. In patients with cardiac problems who are prone to develop HCRIE, antibiotics and follow up is mandatory.



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