

Left Atrial size and stiffness as predictor of prevalence and incidence of Atrial Fibrillation in Patients with Rheumatic mitral stenosis

Ahmed Taha Hussein

ABSTRACT

BACKGROUND

Stiff left atrial (LA) is independent of LA diameter and associated with low LA compliance. We investigated the physiological and clinical implications of LA compliance among patients with Rheumatic tight Mitral stenosis either in sinus rhythm or in atrial fibrillation (AF).

OBJECTIVE

This retrospective cohort study was aimed at assessing the demographic & clinical characteristics, immediate and short-term outcome of VEP undergoing PCI.

valvular pressure gradient (17.1 ± 2.9 Vs 16.2 ± 2.1 mmHg, $P=0.21$). During a mean follow-up of 32 ± 17 months, low LA compliance was independently associated with incidence of AF (HR:4.2; 95%CI:3.077–6.503; $p = 0.031$).

CONCLUSION

Low LA compliance, as estimated non-invasively by an Doppler echocardiography was independently associated with higher clinical prevalence of AF and predicts early incidence in patients with Rheumatic Mitral Stenosis.

PATIENTS AND METHODS

Among 135 consecutive patients with tight rheumatic mitral stenosis, we included 100 patients with sinus rhythm (81.7% female, 25.7 ± 10.6 years) and 35 patients with AF (70.2% female, 27.3 ± 12.4 years). We measured LA compliance, LA diameter and trans-valvular pressure gradient by Doppler echocardiography and compared the values with clinical parameters and the AF prevalence. Results: AF patients had lower compliance compared to sinus rhythm patients (3.1 ± 0.5 Vs 5.6 ± 0.7 ml/mmHg, $P=0.009$) while there was no significant difference in their LA diameter (49.6 ± 1.6 Vs 48.3 ± 1.3 , $P=0.14$) and also insignificant difference in maximum trans-