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Valvular disease associated with benfluorex: Prevalence and echocardiographic features

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Background and objectives.— Restrictive valvular heart disease has recently been reported in patients after benfluorex exposure. However, little is known about its prevalence and echocardiographic features. The aim of our study was to assess the prevalence of benfluorex exposure in patients with restrictive mitral or aortic valve disease and to describe their echocardiographic characteristics.

Methods.— In a single center study, patients with a final diagnosis of unexplained restrictive aortic and/or mitral valvular disease were studied. Only patients with at least moderate valvular regurgitation were included. All echocardiographic records were analysed by two experienced observers. Patients were interrogated for their previous use of benfluorex or other appetite-suppressant drugs.

Results.— Sixty-eight consecutive patients, aged 58 ± 9 years, with restrictive aortic and/or mitral valvular disease were studied, including 63 (93%) women. Among them, 54 (82%) had had previous treatment with appetite-suppressant drugs, including benfluorex alone in 19 (28%) patients, or in combination with another appetite-suppressant drug, mainly dexfenfluramine, in the remaining cases. Among patients with both mitral and aortic involvement, 39 (97%) had been exposed to benfluorex, isolated ($n=14$) or in combination with another appetite-suppressant drug ($n=25$). Echocardiographic features included combined mitral and aortic regurgitation with restricted valve motion in 40 (59%) cases, and isolated mitral or aortic involvement in 5 and 12 patients, respectively.

Conclusion.— The prevalence of appetite-suppressant drugs exposure is very high in patients with left heart restrictive valvular regurgitation. Multiple drugs exposure is frequent in these patients. Combined aortic and mitral restrictive valve regurgitation is highly suggestive of valvulopathy associated with benfluorex or other appetite-suppressant drug valve disease.

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Evaluation of right ventricular function in patients with organic mitral regurgitation

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Objectives.— The aim of this study was to assess right ventricular (RV) ejection fraction (EF) and its determinants in patients with organic mitral regurgitation (MR) by radionuclide angiography.

Methods.— Two-hundred eight patients (62 ± 13 years, 135 males) with moderate to severe organic MR underwent an echocardiographic examination and left and right ventricular assessment by radionuclide angiography. The left ventricle (LV) was divided into 9 regions to assess regional LV function.

Results.— Mean RV EF was $40 \pm 10\%$, ranging from 10 to 65%. One hundred fifty-one patients were in sinus rhythm, and 57 patients (27%) in atrial fibrillation. Tricuspid annulus S wave velocity measured in a subset of patients ($n=92$) correlated weakly with RV EF ($r=0.27$, $P=0.018$). Fifty-nine patients (28%) had a RV EF $< 35\%$. Patients with RV EF $< 35\%$ had lower systolic blood pressure ($P=0.045$), larger RV ($P=0.007$), higher pulmonary artery systolic pressure (PASP, $P=0.045$) and had more diuretics ($P=0.009$) compared with those with RV EF $> 35\%$. In univariate analysis, echocardiographic predictors of RVEF were LVEF ($r=0.33$, $P<0.0001$), LV end-diastolic diameter ($r=-0.26$, $P=0.001$) and volume ($r=-0.29$, $P=0.001$), left atrial size ($r=-0.22$, $P=0.003$), mitral E velocity ($r=-0.29$, $P<0.0001$), PASP ($r=-0.22$, $P=0.004$), and aortic stroke volume ($r=0.31$, $P=0.007$). In the subset of patients with effective regurgitant orifice (ERO) and regurgitant volume quantification RV EF correlated with ERO ($r=-0.34$, $P=0.005$) and regurgitant volume ($r=-0.33$, $P=0.008$). RV EF correlated closely with radionuclide LV septal function (regional LV EF 8: $r=0.49$, $P<0.0001$). In multivariate analysis, LV septal function ($r=0.43$, $P<0.0001$) was the main determinant of RV function. LV end-diastolic diameter ($r=-0.25$, $P<0.0001$) and PASP ($r=-0.18$, $P=0.009$) were also independent predictors of RVEF.