

# Patient-focused outcomes following open-access echocardiography for suspected chronic heart failure

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**I**n a retrospective longitudinal cohort study of 111 consecutive patients with suspected left ventricular systolic dysfunction (LVSD) referred for open-access echocardiography, patient's views at one-year follow-up in terms of satisfaction with the service, ongoing symptoms and personal health beliefs were assessed. Eighty-five (76%) patients completed a one-year follow-up questionnaire. LVSD was identified in only 18 (16%) patients. While 93% of all patients found the echocardiogram useful, 27% of patients could not recall being informed of the result. Many patients remained undiagnosed and symptomatic at one year. The detection rate for LVSD by open-access echocardiography remains low despite the use of a structured referral letter and screening electrocardiogram and chest X-ray.

## Introduction

Open-access echocardiography is increasingly available to general practitioners (GPs) across the UK.<sup>1</sup> It is valued by GPs<sup>2,3</sup> and may reduce waiting times,<sup>4</sup> however, patients' perceptions and impact on diagnosis of open-access echocardiography have not been previously reported.

We assessed the views of 111 patients referred with suspected heart failure at one-year follow-up in terms of satisfaction with open-access echocardiography, ongoing symptoms and personal health beliefs. Patients were contacted between October 2004 and January 2005.

## Results

Despite the use of a structured referral form and pre-test electrocardiogram (ECG) and chest X-ray,



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the pick-up rate for systolic dysfunction was low (16%) but consistent with previous studies (8–31%) and supports the widely accepted notion that making a clinical diagnosis of heart failure is difficult.<sup>5–7</sup> Diagnosis appears even more difficult in women, with a trend towards a lower rate of systolic dysfunction in women than men (12% vs. 22%,  $p=0.08$ ).

Eighty-five patients (76%) completed our follow-up survey. The mean follow-up was  $398 \pm 164$  (range: 81–747) days. Seventy-six patients (93%) thought echocardiography was useful, however, 22 patients (27%) reported not having been told the results, suggesting the 'flow' or retention of information is inadequate. Generally, fully informed patients have better outcomes in terms of improved compliance, functional capacity and patient-physician relationship.<sup>8</sup> Lack of a test result adversely affects patient satisfaction, illustrated in our study by a reduction in the number of patients who thought the echocardiograph useful from 98% to 74% in patients who could not recall the result of the echocardiograph.

At follow-up, there were no significant changes in symptoms (dyspnoea, oedema and fatigue) in patients with systolic dysfunction (all  $p>0.05$ ). In patients with preserved systolic function there were

fewer patients with dyspnoea (88% vs. 71%,  $p=0.02$ ) but no change in the prevalence of other symptoms ( $p>0.05$ ). Patients were likely to agree with their GP's diagnosis, however, when no reason had been offered by a physician, patients tended to find cause in psychosocial factors, namely obesity, smoking, stress and lack of exercise. Other reasons suggested were depression, nutrition, occupational chemical hazard, unemployment, over-exertion, and the weather!

## Discussion

Our data show that the 'pick-up' rate for systolic function by open-access echocardiography remains low and many patients referred to the service remained symptomatic at one-year follow-up. Many patients could not give a reason for their

symptoms at follow-up suggesting that they remained undiagnosed. Indeed many patients could not recall being given the result of their echocardiograph. This may in part be due to the structure of open-access testing, as patients are not given the result by the technician and do not routinely see a cardiologist. Future studies should place greater emphasis on the importance of communication of test results especially in the context of patient's symptoms ●

## Conflict of interest

None declared.

## Authors' contributions

SJL, AN, JR and MAD were involved in the day-to-day running of the open-access echocardiography service. SJL, VMS and MAD designed the study. SJL, VMS, and MAD collected and analysed the data. All authors contributed to writing the paper.

## Key messages

- The pick-up rate for systolic dysfunction with open-access echocardiography is low
- The majority of patients (93%) consider echocardiography to be useful, although many (27%) do not recall receiving the result
- Many patients were unable to provide a reason for their symptoms, suggesting that the cause remains undiagnosed
- More emphasis should be placed on the importance of communication of test results

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