

## Scottish Parliament Region: Highlands and Islands

### Case 200501744: Western Isles NHS Board

#### Summary of Investigation

##### ***Category***

Health: Hospital; Cardiology

##### ***Overview***

The complainant (Mrs C) raised a number of concerns about the treatment and advice which she received in relation to her heart condition.

##### ***Specific complaint and conclusion***

The complaint which has been investigated is that Mrs C was given conflicting interpretations of echocardiography examinations undertaken between 2002 and 2005 and that she was given erroneous advice about her condition (*not upheld*).

##### ***Redress and recommendations***

The Ombudsman has no recommendations to make.

## **Main Investigation Report**

### **Introduction**

1. The complainant (Mrs C) told me that, for almost four years, she was told by staff at the Western Isles Hospital (Hospital 1) that she had an enlarged heart. She had a series of echocardiography examinations undertaken at Hospital 1 and was latterly told by doctors that the enlargement had worsened and warranted an angiography and subsequent repair or replacement of a heart valve.

2. Mrs C was referred to a hospital within another health board (Hospital 2) and underwent an angiography on 23 June 2005. A consultant cardiologist (the Consultant) at Hospital 2 told Mrs C that, based on the information which he had been given by Hospital 1, she would have to remain at Hospital 2 to have immediate heart surgery. After performing the angiography, the Consultant informed her that she did not have an enlarged heart, that there had been no need for an angiography or for the referral to Hospital 2 and that there would be no need for her to have surgery in the near future. The Consultant explained to her that she did have a leaking heart valve but that its condition was classed as moderate.

3. Mrs C complained to the Western Isles NHS Board (the Board) on 8 July 2005. She complained that she had been told that she had an enlarged heart and that this had caused her anxiety and to modify her lifestyle accordingly but, following investigations in Hospital 2, she was told that she did not have an enlarged heart.

4. Mrs C complained to the Ombudsman's office on 28 September 2005 that she was given conflicting interpretations of examinations undertaken in Hospital 1 and Hospital 2 between 2002 and 2005. She complained that she was told, in 2002, that she had an enlarged heart, but in 2005 was told that she did not and that her condition was not as serious as she had been led to believe.

5. The complaint from Mrs C which I have investigated is that Mrs C was given conflicting interpretations of echocardiography examinations undertaken between 2002 and 2005 and that she was given erroneous advice about her condition.

## **Investigation**

6. During my investigation of this complaint I examined the correspondence between Mrs C and the Board as well as the Board's complaint file on this matter. I also obtained Mrs C's relevant medical records and asked the Ombudsman's clinical adviser and a cardiology adviser (the Advisers) to review these and provide advice on the complaint.

7. I have not included in this report every detail investigated but I am satisfied that no matter of significance has been overlooked. Mrs C and the Board were given an opportunity to comment on a draft of this report.

### *Echocardiography*

8. An investigation using ultrasound, the uses of which include measurement of the size of the heart chambers and the function of the heart muscle. It also assesses function of the heart valves. The most common method is the trans-thoracic approach, when the sensor is placed on the chest wall. Further information may be obtained by the use of a sensor in the oesophagus (trans-oesophageal echocardiogram (TOE)). As a rule, a TOE gives better views of the mitral valve and better assessment of the degree of prolapse and size of the left atrium than does a trans-thoracic echocardiogram.

### *The mitral valve*

9. This is the valve which separates the left atrium of the heart from the left ventricle. Blood flows from the atrium to the ventricle. The mitral valve prevents any blood returning to the left atrium. If there is mitral valve regurgitation (leakage) then some blood will leak back into the left atrium. If the leakage is significant then the left atrium will enlarge, or pressure in the lungs will increase, or a mixture of the two. Enlargement of the left atrium can lead to an irregular heart rhythm. This, in turn, can lead to the formation of blood clots in the left atrium. In these cases, anticoagulation with warfarin needs to be considered. Mitral valve surgery (either replacement or repair) will need to be considered to try to prevent enlargement of the atrium and the rise in pulmonary artery pressure.

**Complaint: Mrs C was given conflicting interpretations of echocardiography examinations undertaken between 2002 and 2005 and that she was given erroneous advice about her condition**

10. This complaint is about the clinical interpretations of the cardiology examinations undertaken. Mrs C explained that she had changed her lifestyle

due to the diagnosis of an 'enlarged heart' and that she had suffered a great deal of anguish over the three years since the original diagnosis until she was told by doctors in Hospital 2 in 2005, that her condition was not as serious as she had previously been told.

11. On 4 March 2002 Mrs C attended Hospital 1 for follow-up of a mitral valve prolapse and was seen by a doctor (the Doctor). On 20 March 2002, a trans-thoracic echocardiogram showed her left atrium to be enlarged. In view of these findings, the Doctor asked for a second opinion from Hospital 2. The Doctor wrote to Mrs C's General Practitioner describing marked enlargement of the left atrium.

12. On the 31 October 2002 a TOE was undertaken at Hospital 2. It was hoped that the TOE would provide further detail of the mitral valve disease. It was reported that Mrs C had tolerated the TOE very poorly and that the examination was abbreviated. The interpretation given of the TOE was that Mrs C had mitral valve disease but that it was not as serious as had been determined in Hospital 1. Mrs C informed me that she was not told of the outcome of the investigations at Hospital 2 at the time. Mrs C continued to be followed up in Hospital 1. She was given lifestyle advice in view of her enlarged heart as per Hospital 1's examinations. Mrs C was discharged on 14 July 2003 when the Doctor found her to be keeping well.

13. Both the examinations at Hospital 1 and at Hospital 2 showed that Mrs C had mitral valve disease but to different extents. The Advisers advised that, since the TOE carried out in Hospital 2 had been abbreviated; it was not necessarily incompatible with the echocardiogram carried out in Hospital 1. The Advisers were of the view that the interpretation of the echocardiogram conducted in Hospital 1 was reasonable and that the advice given to Mrs C was appropriate.

14. On 16 January 2005, Mrs C was admitted to Hospital 1 suffering from shortness of breath and chest tightness. Following this admission a further echocardiogram was arranged. Doctors at Hospital 1 told Mrs C that this showed progress of the mitral valve disease identified in 2002 and a severely enlarged left atrium. The Advisers have explained that this report indicates considerable deterioration in the three years since her previous examination. The echocardiogram findings prompted a referral to Hospital 2. The Advisers have reviewed the echocardiogram and stated that it is of good quality and

shows an enlarged left atrium. The Advisers agree that the interpretation of the echocardiogram was reasonable.

15. Mrs C was admitted to Hospital 2 on 23 June 2005 for further investigations which included further echocardiograms and a cardiac catheter examination. A TOE was reported as showing only moderate mitral valve disease; that left atrial and ventricular sizes were within the normal range and there was no evidence of left ventricular dysfunction. None of the findings from Hospital 1 had been confirmed by the reports of these procedures. When Mrs C was informed of the 2005 findings at Hospital 2 and, simultaneously, of their 2002 findings, she felt that she had worried unnecessarily about her heart condition, which had turned out not to be as serious as doctors in Hospital 1 had led her to believe. She also considered that she had led a restricted lifestyle as a consequence.

16. The Advisers stated that, from their examination of the TOE undertaken at Hospital 2, it does show definite dilatation of the left atrium in several of the views. No Doppler (dynamic) pictures were available but the Advisers stated that the still images are sufficient to confirm left atrial enlargement, much the same as the echocardiograms done at Hospital 1 in April 2005.

17. The plan was for Mrs C to be followed up at Hospital 2. On 23 February 2006, there was a slight increase in breathlessness and a repeat echocardiogram showed some progression of her mitral valve disease. Mrs C was referred to a cardiothoracic surgeon for advice. Mrs C was distressed about this development. The changes observed were an increase in degree of mitral regurgitation and the development of dilatation of the left atrium. The cardiothoracic surgeon saw Mrs C on 7 March 2006 and she had a repair operation on 28 August 2006.

18. The Advisers commented that the 2006 echocardiogram from Hospital 2 shows little change from that done there in 2005. There are differing interpretations of the investigations carried out in Hospital 2 in 2005. The Advisers stated that these showed atrial enlargement and mitral valve disease. Given Mrs C's need for surgery in August 2006, it seems probable that this interpretation is correct.

19. In summary, the findings of an enlarged atrium in Hospital 1 in March 2002 were not confirmed when the echocardiogram was done at Hospital 2 in

October 2002. The Advisers commented that it is not possible to determine with certainty the accuracy of the echocardiogram from Hospital 1 but, since the echocardiogram carried out in Hospital 2 in 2002 had to be abbreviated, the two echocardiograms may well not have been as incompatible as appears. In other words, the echocardiogram from Hospital 1 may well have been accurate. Subsequently, the worsening found in Hospital 1 in April 2005 was again not confirmed at Hospital 2 in June 2005, but the Advisers stated that both of these echocardiograms do, in fact, show dilatation of the left atrium.

20. The Advisers concluded that the interpretation of the echocardiograms done at Hospital 1 was reasonable and that the information given to Mrs C was accurate.

### *Conclusion*

21. In 2002, Mrs C was told by doctors at Hospital 1 that she had an enlarged heart and mitral valve disease. She was given lifestyle advice in view of this condition. The report of further investigations in 2002 at Hospital 2 stated that her condition was not as serious as determined by Hospital 1. Mrs C was not informed of this. Mrs C was extremely anxious about her cardiac problems and modified her lifestyle accordingly.

22. It is clear that both the examinations in Hospital 1 and Hospital 2 show that Mrs C had mitral valve disease in 2002. The Advisers advised that the interpretation of the 2002 echocardiograms in Hospital 1 was reasonable and not necessarily incompatible with the abbreviated TOE carried out that year in Hospital 2. I cannot find any clinical fault in Hospital 1 in 2002.

23. The Advisers stated that the 2005 echocardiogram carried out in Hospital 1 was of good quality and properly interpreted. Doctors at Hospital 1 gave the view that this shows an enlarged left atrium. The Advisers have also given the view that the 2005 echocardiogram carried out in Hospital 2 confirms this and that the view given by Hospital 2 then was not accurate. They also state that the 2006 echocardiogram carried out at Hospital 2, which was reported as showing enlargement, is little different from the 2005 echocardiogram carried out at Hospital 2. Therefore, whilst there is some disagreement about the interpretation of the 2005 echocardiogram in Hospital 2, there is no evidence that the 2005 echocardiograms carried out in Hospital 1 were wrongly interpreted by Hospital 1.

24. I do not uphold this complaint.

*Recommendation*

25. The Ombudsman has no recommendations to make.

**Explanation of abbreviations used**

Mrs C	The complainant
Hospital 1	The Western Isles Hospital
Hospital 2	A hospital within another Health Board
The Advisers	The Ombudsman's clinical and cardiology advisers
The Consultant	A consultant cardiologist at Hospital 2
The Board	Western Isles NHS Board
TOE	Trans-oesophageal echocardiogram
The Doctor	A cardiologist at Hospital 1



**Glossary of terms**

Angiography	A procedure to x-ray blood vessels
Atrium	Upper chamber of the heart
Cardiac catheter examination	An examination of the heart where a probe is inserted into the heart through a blood vessel
Dilatation	Enlargement
Echocardiogram	Ultrasound examination of the heart (see paragraph 9)
Heart valve	A valve between each of the four chambers of the heart which controls one-way flow of blood
Mitral valve	The valve which separates the two chambers on the left side of the heart
Mitral valve prolapse	When the mitral valve does not completely block the backflow of blood between the two chambers on the left side of the heart
Regurgitation	Leakage
Trans-oesophageal echocardiogram (TOE)	An invasive echocardiography examination when the sensor is introduced into the oesophagus (gullet) (see paragraph 9)
Trans-thoracic echocardiogram	A non-invasive echocardiography examination when the sensor is places on the chest wall (see paragraph 9)
Ventricle	The lower chambers of the heart
Warfarin	An anticoagulant drug

