

The Scottish Public Services Ombudsman Act 2002

Investigation Report

UNDER SECTION 15(1)(a)

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Scottish Parliament Region: North East Scotland

Case 201401376: Grampian NHS Board

Summary of Investigation

Category

Health: Hospital; Cardiology

Overview

The complainant (Mrs C) complained about the treatment provided to Mr A, after he was admitted to the Aberdeen Royal Infirmary (the Hospital) with severe chest pain. Mr A was initially treated as having acute coronary syndrome (a medical term used when doctors believe that the patient has a serious problem with the narrowing of one or more of the coronary arteries) because of an elevated serum troponin (this is present in the bloodstream when there has been damage to the heart). However, approximately two and a half days after his admission, it was diagnosed that Mr A had a dissection flap (tear) in the ascending aorta (a portion of the large trunk artery that carries blood from the left ventricle of the heart to branch arteries). Arrangements were made for Mr A to undergo surgery that day, but he died in the anaesthetic room before the operation could begin.

Specific complaint and conclusions

The complaint that has been investigated is that staff at the Hospital failed to provide Mr A with an appropriate level of treatment following his admission in January 2012 (*upheld*).

Redress and recommendations

The Ombudsman recommends that the Board:

- (i) issue a written apology to Mr A's family for: the failure to identify that Mr A had aortic dissection when the bedside echocardiogram was carried out on 2 January 2012; and the delay in providing a copy of the bedside echocardiogram to his office; and
- (ii) provide evidence that they have taken steps to raise awareness of aortic dissection in their A&E,

Completion date

18 March 2015

18 April 2015

Emergency Medicine, General Medicine and
Cardiology departments.

The Board have accepted the recommendations and will act on them accordingly.

Main Investigation Report

Introduction

1. The complainant (Mrs C) complained about the treatment provided to Mr A, after he was admitted to the Aberdeen Royal Infirmary (the Hospital) with severe chest pain. Mr A was initially treated as having acute coronary syndrome (a medical term used when doctors believe that the patient has a serious problem with the narrowing of one or more of the coronary arteries) because of an elevated serum troponin (this is present in the bloodstream when there has been damage to the heart). However, approximately two and a half days after his admission, it was diagnosed that he had a dissection flap (tear) in the ascending aorta (a portion of the large trunk artery that carries blood from the left ventricle of the heart to branch arteries). Arrangements were made for Mr A to undergo surgery that day, but he died in the anaesthetic room before the operation could begin.

2. The complaint from Mrs C that I have investigated is that staff at the Hospital failed to provide Mr A with an appropriate level of treatment following his admission in January 2012.

Investigation

3. Investigation of the complaint involved reviewing the information received from Mrs C and Grampian NHS Board (the Board). My complaints reviewer also obtained advice from a medical adviser (the Adviser), who is a consultant cardiologist.

4. Mrs C first complained to me in December 2012. We wrote to the Board in January 2013 and requested all of the information they held in relation to the complaint. After reviewing the evidence received from the Board and obtaining comments from the Adviser, my complaints reviewer contacted the Board and asked them if they could provide a copy of an echocardiogram carried out at Mr A's bedside on 2 January 2012. The Board subsequently wrote to us and said that they only held a copy of the echocardiogram carried out on 4 January 2012 in their records. We contacted the Board again about this and they said that there was no evidence in relation to the bedside echocardiogram carried out on 2 January 2012.

5. In July 2013, we closed the complaint on the basis that there was no evidence that the actions of the doctors involved were unreasonable or that

there had been any unnecessary delays in treating Mr A. In the decision letter, we commented on the fact that Mr A was at risk of aortic dissection (a tear in the aorta) had not been picked up from the first echocardiogram, but that there was no recording of this. We said that the Adviser had stated that it may not have been possible to identify the problem from this at that time anyway. We also said that it was possible that the dissection only developed between 2 January 2012 and 4 January 2012.

6. In March 2014, the Board wrote to us to say that further evidence had been identified. They sent us a copy of a statement that the consultant cardiologist (the Consultant) had completed shortly after Mr A's death. This stated that the echocardiogram carried out at Mr A's bedside on 2 January 2014 had clearly shown that Mr A had an aortic dissection at that time. In view of this, we again asked the Board if they could provide a copy of the bedside echocardiogram carried out on 2 January 2012. On this occasion, the Board said that they had established that the echocardiogram had in fact been stored in an electronic archive system. They copied and sent this to us. In view of this additional evidence being obtained, we reopened the case. I will comment on the Board's failure to provide this crucial piece of evidence to us during our initial investigation below.

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.

Complaint: Staff at the Hospital failed to provide Mr A with an appropriate level of treatment following his admission in January 2012

8. Mr A was admitted to the Hospital's acute medical assessment unit with chest pain in the early hours of 2 January 2012. He was treated as having acute coronary syndrome because of an elevated serum troponin. He was transferred to the care of cardiologists, who noted that he had severely high blood pressure.

9. On the day of Mr A's admission, an echocardiogram (an instrument for diagnosing heart abnormalities that uses reflected ultrasonic waves to show the structures and functioning of the heart) was carried out at his bedside by a trainee cardiologist (the Trainee). The Trainee recorded that the test showed thickening of the left ventricular muscle - left ventricular hypertrophy (LVH), a dilated aortic root of 4.5 to 5 centimetres, a dilated ascending aorta, and a

bicuspid aortic valve (an aortic valve with only two leaflets instead of three). The conclusion from this test was that Mr A had 'malignant hypertension', meaning very severe high blood pressure.

10. Mr A was reviewed regularly on 2 and 3 January 2012. On 3 January 2012, the Consultant noted that a third heart sound and an early diastolic (when the heart is refilling with blood) murmur were heard with a stethoscope and arranged a further echocardiogram. On the following day, Mr A was sent for the echocardiogram. This showed the presence of a tear in the ascending aorta. A computerised tomography (CT) scan (a scan that uses a computer to produce an image of the body) was performed the same morning and this confirmed the diagnosis of aortic dissection. Arrangements were made for Mr A to undergo surgery that day, but he died in the anaesthetic room before the operation could begin.

Board's response to complaint

11. Mr A's family met the Board to discuss their complaint on 22 February 2012. The Board then wrote to the family on 18 April 2012. They said that they hoped they had found the meeting useful. They said that, as the Consultant had explained at the meeting, when any patient is admitted, the medical staff make a preliminary diagnosis on the basis of the patient's symptoms and initial tests that are carried out. They said that Mr A had been transferred to the cardiology ward because, at first, doctors were of the view that he had had a heart attack. They stated that he was monitored there and given some further tests that showed he had had a tear in his aorta that required urgent surgery.

12. The Board stated that as soon as this was discovered, the Consultant contacted the cardiothoracic surgeon on duty that day. Mr A had a CT scan, after which arrangements were made for him to go to theatre as soon as possible for a major operation. They stated that there are normally two theatres allocated for cardiothoracic (relating to the heart and chest or lungs) work, although over the holiday period, only one of these theatres would normally be staffed. They said that the surgeon was already operating on a patient and they had to wait until that operation was completed.

13. The Board stated that initially it had been thought that Mr A was suffering from angina, but it then became apparent that he had a dissection, linked to a congenital problem with one of his heart valves. His prognosis and treatment

options then became significantly different. They stated that it seemed that due to the uncertainty about Mr A's diagnosis, communication with the family during Mr A's admission could have been better and they apologised for this. They also stated that the Consultant was sorry that he did not have the opportunity to discuss Mr A's situation with them during his admission. They said that his main concern when the severity of Mr A's condition became apparent was to make arrangements for his surgery.

Advice obtained

14. My complaints reviewer asked the Adviser if it had been reasonable for the Trainee not to identify the dissection flap in the echocardiogram carried out on 2 January 2012. In his response, the Adviser said that he had considered the echocardiogram carried out on 2 January 2012 and that it did demonstrate the presence of a dissection flap very close to the aortic valve leaflets. He said that this position made it somewhat difficult to identify. He commented that the echocardiogram also showed evidence of a leaking aortic valve in that there was fluttering of the anterior mitral valve leaflet.

15. The Adviser said that whilst this was a finding on echocardiography that the Trainee may have learnt about in theory, it was highly unlikely that he would have come across this finding in an echocardiogram that he himself had performed. He said that the echocardiographic finding of ascending aortic dissection, whilst being of major theoretical importance, will rarely be seen in terms of practical experience. He stated that the reason for this is that in probably more than 50 per cent of patients with aortic dissection, the diagnosis is not evident on standard echocardiography. He stated that when the finding is present, it is likely that surgery for dissection in the ascending aorta will be performed either as an emergency or as an urgent procedure.

16. The Adviser also commented, however, that the cardiology curriculum, which defines the process of training and the competencies needing to be acquired for the award of a certificate of completion of training in cardiology, specifies that all trainees must be included in the emergency on-call rota. This is because there are a number of life threatening, but relatively unusual diagnoses, such as acute aortic dissection, for which a trainee needs to develop both diagnostic and treatment skills. He said that he had also noted that the Consultant had stated that the Trainee was relatively more senior than two other cardiology trainees working in the Hospital at that time.

17. The Adviser commented that after considering all of this, on balance, he concluded that it was not reasonable that the Trainee did not identify the dissection flap on the echocardiogram.

18. My complaints reviewer then asked the Adviser if he considered that the rest of the report the Trainee had completed on the echocardiogram was reasonable. In his response, the Adviser also said that the Trainee did not include the fact that the echocardiogram showed the presence of aortic regurgitation (where blood leaks back through the aortic valve) in the report. The Adviser said that a combination of chest pain, a dilated ascending aorta, a bicuspid aortic valve, difficult to control high blood pressure and aortic regurgitation should in combination have raised a high index of suspicion of a diagnosis of aortic dissection. He said that the absence of the aortic regurgitation from the echocardiogram report contributed to a lack of recognition of the overall pattern of abnormal findings, and in this respect may be considered to be unreasonable.

19. My complaints reviewer also asked the Adviser if he considered that the action taken by the Consultant in response to the Trainee's report had been reasonable. The Adviser said that the Consultant had reflected on this matter in the statement he had completed after Mr A's death. The statement had only been sent to us in March 2014, after our initial investigation had been completed. In this, the Consultant had stated that he did not look at the echocardiogram himself at the time, but 'felt some reassurance with the echo result'. In his statement, the Consultant acknowledged that the Trainee raised with him whether a CT scan should be done to assess for aortic dissection. He said that his response was that if Mr A did not have evidence of this on an echocardiogram, it would be unlikely but still possible and a Transoesophageal echocardiogram or CT scan may be required. The Consultant reviewed Mr A on the following day and planned for both an angiogram and a repeat echocardiogram to be performed on 4 January 2012.

20. The Adviser said that, in his statement, the Consultant had acknowledged that what he did not do, was to look at the echocardiogram recorded by the Trainee. He said that the Consultant had also acknowledged in his statement that, as the Consultant looking after Mr A, his failure to personally review the echocardiogram contributed to a delay in the diagnosis of aortic dissection. The Adviser also commented that the Consultant had acknowledged that the presence of a dilated aorta and chest pain should have led him to do a further

investigation in the form of a Transoesophageal echocardiogram or CT scan. The Adviser said that he agreed with the Consultant's own analysis that his response to the report was not reasonable.

21. Finally, my complaints reviewer asked the Adviser for his comments on the overall treatment provided to Mr A. In his response, the Adviser said that it was now clear that the evidence of the diagnosis of aortic dissection was available on 2 January 2012, and the diagnosis could, and probably should have been made on that date. He stated that had this diagnostic information been available, then there would have been a greater chance that the limited resources available during the holiday period could have been managed and directed towards providing an earlier operation for Mr A. Failing that, it may have been possible to transfer Mr A to another hospital for the operation. He stated that such an operation could have occurred on 3 January rather than 4 January 2012. The Adviser said that the operation that Mr A required was very risky and that it was uncertain whether or not earlier surgery would have altered the outcome. However, he considered that earlier surgery would have certainly increased Mr A's chances of survival.

Conclusion

22. The medical advice I have received is that, on balance, it was not reasonable that the Trainee did not identify the dissection flap on the bedside echocardiogram carried out on 2 January 2012. The Trainee also failed to include the fact that the echocardiogram showed the presence of aortic regurgitation in his report. The Adviser also stated that the Consultant had acknowledged that the presence of a dilated aorta and chest pain should have led him to do a further investigation at that time in the form of a Transoesophageal echocardiogram or CT scan. In view of all of this, I consider that the presence of the dissection flap in the ascending aorta should have been made on 2 January 2012.

23. Mr A required a very high-risk operation. However, had the correct diagnosis been made on 2 January 2012, surgery could have been carried out earlier than 4 January 2012, which would have increased Mr A's chances of survival. I have, therefore, upheld Mrs C's complaint.

24. Furthermore, it was totally unacceptable that the Board did not provide a copy of the bedside echocardiogram when we initially investigated the complaint, despite the fact that we specifically asked them for this on two

occasions. It is essential that organisations ensure that all of the relevant evidence is identified when they are carrying out their investigations into a complaint. This information should then be sent to my office when we request it. The Board have now sent me evidence of the steps they have taken to try to ensure that all of the relevant evidence in relation to a complaint is identified and sent to my office when we request this. The Board's failure to do so in this case has undoubtedly added to the family's distress after Mr A's death.

Recommendations

- | | <i>Completion date</i> |
|--|------------------------|
| 25. I recommend that the Board: | |
| (i) issue a written apology to Mr A's family for: the failure to identify that Mr A had aortic dissection when the bedside echocardiogram was carried out on 2 January 2012; and the delay in providing a copy of the bedside echocardiogram to my office; and | 18 March 2015 |
| (ii) provide evidence that they have taken steps to raise awareness of aortic dissection in their A&E, Emergency Medicine, General Medicine and Cardiology departments. | 18 April 2015 |

26. The Board have accepted the recommendations and will act on them accordingly. The Ombudsman asks that the Board notify him when the recommendations have been implemented.

Explanation of abbreviations used

Mrs C	the complainant
Mr A	the aggrieved
the Hospital	Aberdeen Royal Infirmary
the Board	Grampian NHS Board
the Adviser	the Ombudsman's medical adviser
the Consultant	the consultant cardiologist
the Trainee	the trainee cardiologist

Glossary of terms

acute coronary syndrome	a medical term used when doctors believe that the patient has a serious problem with the narrowing of one or more of the coronary arteries
aorta	the largest artery in the body that transports blood out of the heart to the smaller arteries
aortic dissection	a tear in the aorta
aortic regurgitation	where blood leaks back through the aortic valve
bicuspid aortic valve	an aortic valve with only two leaflets instead of three
cardiothoracic	relating to the heart and chest or lungs
computerised tomography (CT) Scan	a scan that uses a computer to produce an image of the body
diastolic	when the heart is refilling with blood
dissection flap	Tear
echocardiogram	an instrument for diagnosing heart abnormalities that uses reflected ultrasonic waves to show the structures and functioning of the heart
elevated serum troponin	this is present in the bloodstream when there has been damage to the heart
left ventricular hypertrophy	thickening of the left ventricular muscle

malignant hypertension

very severe high blood pressure

Transoesophageal
echocardiogram

a procedure that involves passing an
ultrasound sensor into the oesophagus (the
pipe that goes from the mouth to the stomach)