Scottish Parliament Region: Glasgow

Case 200500252: Greater Glasgow and Clyde NHS Board

Summary of Investigation

Category

Health: Hospitals; Clinical treatment

Overview

The complainant (Ms C) raised a number of concerns after her mother (Mrs A) died following cardiac surgery.

Specific complaints and conclusions

The complaints which have been investigated are that:

(a) Mrs A was not referred for surgery earlier *(not upheld)*;

(b) there were problems in providing nutrition to Mrs A after her operation and that these were not adequately explained *(partially upheld)*;

(c) a ventilator was not operated properly *(partially upheld)*; and

(d) septicaemia was not diagnosed properly or early enough *(not upheld)*.

Redress and recommendations

The Ombudsman recommends that:

(i) Greater Glasgow NHS Board apologise to Ms C; and

(ii) that staff are reminded of the importance of proper and full explanations as part of the response to complaints.

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

Main Investigation Report

Introduction

1. On 24 April 2005 the Ombudsman received a complaint from a woman (referred to in this report as Ms C) about the care and treatment provided to her mother (Mrs A) by Glasgow Royal Infirmary (the hospital).

2. Mrs A was admitted to the hospital for repeat cardiac surgery consisting of mitral valve replacement, aortic valve replacement and two coronary artery bypass grafts. The operation was performed on 4 March 2004 but sadly Mrs A died on 17 March 2004.

3. The complaints from Ms C which I have investigated are that:

(a) Mrs A was not referred for surgery earlier;
(b) there were problems in providing nutrition to Mrs A after her operation and that these were not properly explained;
(c) a ventilator was not operated properly; and
(d) septicaemia was not diagnosed properly or early enough.

Investigation

4. Mrs A had rheumatic fever as a child. Rheumatic fever causes inflammation of the heart valves, especially the mitral valve, which is the inlet valve to the main pumping chamber of the heart. In 1968, Mrs A had an operation to stretch the narrowed mitral valve. Eventually, this valve became narrowed again and Mrs A underwent mitral valve replacement in 1981, which was repeated in 1996. Following this, there was a leak around the valve. This is an uncommon but well recognised complication of valve replacement, particularly when there has been previous surgery – the stitches have a tendency to cut through the tissue, so blood can leak around the artificial valve when the heart is pumping. This causes back pressure on the lungs resulting in the patient being short of breath.

5. Mrs A was being followed up by the cardiologist and his team. She was experiencing increasing symptoms of shortness of breath that interfered significantly with her lifestyle. Her symptoms increased to the stage that the cardiologist admitted her for investigations with a view to proceeding to surgery. These investigations confirmed that Mrs A had a significant leak around her

prosthetic mitral valve and that the back pressure on her lungs was causing a degree of pulmonary hypertension (a rise in the pressure of the pulmonary artery which takes the blood from the heart to the lungs). They also showed that Mrs A had a moderate to severe leak of her aortic valve (the main outlet valve on the left side of the heart). In addition, Mrs A had moderately severe blockages in two of her three coronary arteries.

6. Mrs A had her operation on 4 March 2004 and it appeared to have gone well. However, Mrs A's condition gradually deteriorated and she died of multi-organ failure on 17 March 2004.

7. Ms C wrote to the hospital on 19 March 2004. She said she had no criticism of the Consultant Cardiac Surgeon who had carried out Mrs A's operation but she was concerned that Mrs A had not been referred earlier when she was stronger and would have been better able to tolerate the operation. Ms C was also concerned about Mrs A's post-operative care, which she felt did not allow her to recover from surgery.

8. Following correspondence about the complaint, Ms C and two representatives from her MSP's office met the Consultant Cardiologist, the Consultant Cardiac Surgeon, a Ward Sister and the Board's Patient Liaison Manager on 18 October 2004 but Ms C remained dissatisfied. On 10 March 2005 she requested Independent Review of her complaint, listing the points that she felt had not been answered satisfactorily.

9. On 1 April 2005, however, the NHS complaints process changed with the removal of the Independent Review Panel process and Ms C was informed that she could complain to the Ombudsman instead if she wished. Ms C did so.

10. In writing this report, I have had access to the complaint and correspondence that Ms C sent to the Ombudsman, Mrs A's clinical notes and the NHS complaint correspondence. I have corresponded with Greater Glasgow NHS Board (the Board) and I have obtained professional advice from an adviser who is a Consultant Cardiothoracic Surgeon and from a nursing adviser. My conclusions are based on the advice I have received.

11. I have not included in this report every detail investigated but I am satisfied that no matter of significance has been overlooked. Both Ms C and the Board have had the opportunity to comment on the draft report.

(a) That Mrs A was not referred for surgery earlier

12. In her initial complaint, Ms C said that she wanted to know why Mrs A had not been referred for surgery over a year earlier when she was stronger. In his reply of 6 May 2004 the General Manager said that it was quite clear that Mrs A had declined surgery 12 months earlier. Ms C replied that Mrs A had never refused surgery. She believed that Mrs A would have been happy to see the surgeon a year earlier, had she been given that option. At the meeting on 18 October 2004, Ms C said that Mrs A had been angry that the hospital had told her GP that she had refused surgery.

13. Mrs A's clinical notes contain copies of letters which the hospital sent to Mrs A's GP. On 7 May and 27 August 2003, the Specialist Registrar from the Department of Medical Cardiology wrote to Mrs A's GP. It is clear from those letters that the possibility of surgery was discussed with Mrs A but that she did not wish to consider it at that point.

14. The Department's Research Fellow wrote to Mrs A's GP on 8 October 2003. He said:

> 'Once again she remains reluctant about surgery but is feeling that we are reaching the stage where it is going to be the only option.'

15. The Senior House Officer wrote to Mrs A's GP on 16 December 2003. She said:

> 'I discussed Mrs A's management with the Consultant Cardiologist today. Mrs A has significant mitral regurgitation through her prosthetic mitral valve and the Consultant Cardiologist feels that we should consider Mrs A for surgery. Mrs A was reasonably happy with this having previously felt that she did not want surgery.'

16. The adviser said that, when considering surgery, the balance of benefits and risks have to be weighed. The benefits to Mrs A if the operation was successful would be to improve her shortness of breath on exertion – judging from her notes

Mrs A was severely limited in her daily activities. It was also hoped that the operation would preserve the function of her left ventricle (main pumping chamber).

17. The adviser said that the risks in Mrs A's case, however, were considerable. Although Mrs A's primary problem was the leak around the artificial mitral valve, she also needed replacement of the aortic valve and bypasses to her two narrowed coronary arteries. This combination in any patient would carry a significant risk. The most significant additional factor in Mrs A's case was the fact that she had had three previous operations on her heart. This is because the healing process after cardiac surgery causes severe scarring in the space around the heart (adhesions). These adhesions need to be cut free in any subsequent operation but this can cause damage to the heart function and may also cause bleeding in the post-operative period.

18. Additional factors were Mrs A's gender (women have a slightly increased risk during cardiac surgery) and her chest history (Mrs A had chronic obstructive pulmonary disease and also was a smoker). These two factors increase the risk of chest problems in the early period after the operation, particularly when the patient is still on a ventilator. This would have been compounded in Mrs A's case by the fact that she had back pressure on the lungs due to her mitral valve disease.

19. The adviser said that, judging from the complaint and the letters in the notes, there was a difference of opinion about the outcome of discussions over the years as to whether Mrs A should have surgery. The decision hinged on how much Mrs A felt that her shortness of breath was interfering with her lifestyle. In the end, Mrs A saw the Consultant Cardiac Surgeon on 13 February 2004. After discussion of the risks and accepting that Mrs A was a high risk case, arrangements were made for surgery.

(a) Conclusion

20. The adviser said that the timing of surgery is difficult and largely depends on the patient's symptoms. It appears from the notes that the question of surgery was first raised in 2002 but that Mrs A felt too well to consider such a high risk procedure at that stage. The adviser said that it was not unreasonable that Mrs A was kept under review by the cardiologists and, as her symptoms worsened, the question of surgery came to the fore. It is also clear from the letters on file that the

situation, as it progressed, was accurately conveyed to Mrs A's GP. I, therefore, do not uphold this complaint.

(b) That there were problems in providing nutrition to Mrs A after her operation and that these were not adequately explained

21. Ms C said that Mrs A developed problems on the third day after her operation. The family were told that Mrs A had 'stomach complications' and the Consultant had made the decision to stop feeding her. The family were told that a referral was made to the Consultant Dietician so that Mrs A would still get nutrition. Ms C said she would like to know why it then took a further three days before nutrition was provided. Ms C said that when she complained on the second night, she was told that it was due to staff shortages in other departments.

22. In his response to this complaint, dated 6 May 2004, the General Manager said that the dietician reviewed Mrs A the day after her operation (5 March 2004) as a matter of routine. At that time, Mrs A was started on a naso-gastric feed (which provides nutrition through the nose into the stomach). Mrs A was again seen routinely on 8 March 2004 when she was noted to have a distended abdomen. On the advice of the on-call surgeon, the feed was stopped. When the dietician visited Mrs A on 9 March she was awaiting review by the surgical team. On 10 March the dietician visited again and, noting that Mrs A was still waiting for her feeding to be re-established, contacted the upper gastrointestinal surgical team.

23. On 10 March 2004, the nutrition team was consulted. The Consultant on the nutrition team was on annual leave so Mrs A was seen by the Specialist Registrar. A plan was made to use a naso-jejeunal tube. This is a special feeding tube which is placed through the nose, gullet (oesophagus) and stomach and straight into the small bowel. It requires a minor procedure to place the tube (endoscopy) and for that reason it is usually carried out by the endoscopy team. Arrangements were made for this to be done and it was inserted on 12 March 2004.

24. The General Manager said that it unfortunately took several attempts to find a general surgeon to carry out this procedure. This meant that Mrs A was not fed for four days in total, although she received intravenous fluids. The General Manager said that this was clearly unacceptable and steps had been taken to ensure that it

would not happen again.

25. Ms C was dissatisfied with this reply. She did not understand why the nutrition tube had not been passed when it was requested. Ms C said that she felt proper nutrition would have helped Mrs A to heal and that these events had put her more at risk.

26. The notes of the 18 October 2004 meeting between Ms C and Health Board officials show that it was agreed there had been an unacceptable delay and that an apology was given to Ms C. In her complaint to the Ombudsman, Ms C said that she remained dissatisfied with the explanation and had received no such apology. I note, however, that the Patient Liaison Manager wrote to Ms C on 16 December 2004. In that letter she said 'I am sorry that there was a delay of four days in your mother receiving a feeding tube'. She also acknowledged the upset that this had caused to Mrs A's family.

27. The adviser said that after surgery, Mrs A still needed large amounts of drugs to support her heart. A major problem was that her digestive system stopped working. The adviser said that in performing such operations the hope is that the stomach and bowels will continue to work, so that the patient can be fed through a naso-gastric tube. Unfortunately, on the fourth day after the operation, Mrs A's stomach stopped accepting the feed and her abdomen became swollen. The adviser said this was common and is related partly to the drugs used to sedate the patient but mainly to the reduced amount of blood flowing through the stomach and bowels, as a consequence of impaired heart function after surgery. The General Surgical team reviewed Mrs A that day and the Surgical Consultant reviewed her the following day.

28. Ms C was concerned about the delay and that lack of nutrition caused by the delay would have impaired Mrs A's recovery. The adviser said that he could understand this concern but it was not unreasonable to wait for two days to see if the problem resolved itself and if Mrs A's digestive system would start to work again of its own accord. When the problem continued, a decision was made on 10 March 2004 to place a naso-jejeunal tube. As this required an upper gastrointestinal endoscopy, the adviser did not consider that two days was an unreasonable time for arrangements to be made to carry this out. The adviser said

that he could understand the family's concern that the delay in starting feeding could impair Mrs A's ability to recover. However, the only alternative was to start intravenous feeding, which carries significant risk of infection. It was, therefore, not unreasonable to wait for several days to see if the problems with the abdomen would settle.

29. The General Manager, in his letter of 6 May 2004, however, acknowledges that the two day wait to have the tube fitted was not acceptable by the standards expected in the hospital. The adviser suspected from comments in the notes that there were problems with communication between the medical teams and that these were conveyed to the family. It is clear that the family's confidence in the teams was undermined. The Board said that they have made improvements to ensure that such delays are not repeated and I asked what they were. The Board said that there is now clear guidance that patients' nutritional needs should be managed by contacting the hospital nutrition team. Contact details are now available in all ward areas and that team is alerted if feeding is required. Following Ms C's complaint, the issues were also raised as learning points during ward meetings and also at multi-disciplinary ward rounds in ITU (Intensive Care Unit) and the weekly multi-disciplinary ITU meeting.

(b) Conclusion

30. Although I can understand Mrs A's family's understandable concerns that nutrition was not being provided over a four day period, clearly the practice of awaiting developments in such cases is normal and acceptable and is unlikely in itself to have hindered Mrs A's recovery. It is also clear that the other alternative to the delay (to feed intravenously) carried further significant risk of infection. In view of the advice I have received I, therefore, do not uphold this element of Ms C's complaint.

31. Ms C also believes that she was not given the apology referred to at the meeting on 18 October 2004. In response to my draft report the Board agreed that the filenote did not accurately reflect who had apologised, and confirmed that it was the Patient Liaison Manager. They apologise to Ms C for this lack of clarity. It is also clear, however, that the explanation 'stomach complications' was not adequate to explain to Ms C what happened to Mrs A, what the situation was or how limited the options were. I, therefore, uphold this complaint to this limited

extent.

(b) Recommendation

32. The Ombudsman recommends that an apology is given to Ms C for the inadequate explanation provided to her.

(c) That the ventilator was not operated properly

33. In her complaint Ms C referred to the events of 10 March 2004. Ms C said that when she visited in the afternoon Mrs A appeared to be making a snoring sound. Ms C noticed that the cap on the tube attached to the ventilator was not closed properly. She told the nurse at the next bed, who closed it. When Ms C visited that evening, there were two doctors with Mrs A. The doctors were looking at the ventilator. Mrs A was blue and leaning over the bed struggling for breath. Ms C said that she stood there for about five minutes panicking before a nurse told her to leave. It seemed to Ms C that the doctors did not know what to do. Ms C was later told that Mrs A might not make it through the night. When she telephoned later, Ms C was told that the Consultant Cardiac Surgeon had been in and had turned the ventilator up and that Mrs A appeared more settled. Ms C said that Mrs A should not have been left to struggle that way and considered that this could have hindered her recovery.

34. In his reply to the complaint, the General Manager said that the doctors had been trying to make appropriate adjustments to the ventilator to try to help Mrs A's respiratory distress. Unfortunately, it can take a while to get the correct settings and that can be very upsetting for anyone watching.

35. Ms C said that she did not understand the explanation. She said that, due to this incident, she had been told that Mrs A might not make it through the night because her lung had collapsed.

36. The adviser said that the operation was carried out by the Consultant Cardiac Surgeon. Judging from the operation note, it was conducted in a satisfactory manner to a high standard. Immediately after her operation, Mrs A appeared to make good progress and, on the second day after surgery there is a comment in the notes that it might be possible to wean her from the ventilator that was helping her to breathe.

37. The adviser said that after surgery the intensive care team hope that the patient can be weaned from the ventilator as soon as possible. Part of this process is to initially allow the patient to breathe for themselves, while receiving some help from the machine. The adviser said that at first Mrs A seemed to be making good progress in this regard. However, the development of a distended abdomen made it difficult for her to breathe for herself. On 10 March 2004, a doctor was asked to see Mrs A because she was in distress when she appeared to be breathing against the machine.

38. I also obtained nursing advice that the ventilator cap described is opened when a patient needs suction and is closed when that procedure has been completed. It is unlikely that it being left open would have contributed to deterioration in the patient's condition as ventilators are sophisticated machines that are very sensitive to any problem. If a problem arose the alarm system would alert staff.

(c) Conclusion

39. Clearly Mrs A was given sedation and the settings were adjusted on the ventilator. Mrs A then appeared to settle. The adviser has said that this was appropriate and commented that during their day-to-day work intensive care staff routinely handle events which to a lay person may seem quite disturbing. He explained that, as the condition of the patient changes, settings on the machine have to be adjusted. Patients do sometimes struggle for a period during this process and observing this can be very distressing for their family. In view of this advice I conclude that the ventilator was properly operated. Although I can understand why Ms C was so concerned, I do not uphold this element of the complaint.

40. Ms C was clearly left with the impression that Mrs A's lung collapsed as a result of the process of adjusting the ventilator and so concluded that the ventilator was not properly operated. However, the medical notes show that a chest x-ray taken at this stage showed significant changes in the right lung and that the doctor was very concerned about Mrs A's prognosis. The adviser said that patients who have chronic obstructive pulmonary disease and who are on a ventilator for any period of time are prone to getting an air leak from their lung. The air gathers in

the space between the lung and the chest wall and the lung collapses. Mrs A in fact developed this problem on 12 March 2004 and a chest drain had to be inserted. There was a failure to communicate this correctly to Ms C. I, therefore, uphold this complaint to the extent that the explanation given to Ms C at the time was inadequate and that a full explanation to enable her to understand what had happened was not provided during the complaint process.

(c) Recommendation

41. The Ombudsman recommends that staff be reminded of the importance of proper and full explanations as part of the response to complaints.

(d) That septicaemia was not diagnosed properly or early enough

42. In her complaint Ms C said that, according to the Board, Mrs A developed septicaemia (an infection in the blood stream) on 8 March 2004 but it was not until 14 March 2004 that Ms C was told. She did not understand how Mrs A could have developed septicaemia or on what date this was diagnosed.

43. At the meeting on 18 October 2004, the Consultant Cardiac Surgeon said that no cause had been identified for the septicaemia. On 8 March 2004, bacteria was identified in the sputum but that was not septicaemia. The Consultant Cardiac Surgeon said that routine surveillance takes place in ITU following surgery and sometimes infections can show up on tests even when there are no obvious symptoms. The decision to treat them or not is based on the medical staff's clinical judgement.

44. The adviser told me that one effect of cardiac surgery is to depress the body's immune system and make it more prone to infection, which might happen for any of the following reasons:

- Being connected to a ventilator through a tube in the windpipe makes a patient more prone to chest infection.
- Any intravenous cannula inserted through the skin provides a potential source for natural skin bacteria to enter and cause infection.
- Having a distended abdomen with bowels which are not working gives bacteria in the bowel a chance to migrate through the bowel wall into the blood stream.

Any of these could possibly have been the source of Mrs A's septicaemia.

45. Patients in intensive care like Mrs A are always at risk of infection and so staff are always on the lookout for signs of this. The medical records show that Mrs A's temperature was measured regularly, the white cell count in her blood stream was monitored and samples of sputum, urine and blood sent regularly to the laboratory. Culture of any specimen in the laboratory takes 48 hours to give a positive diagnosis and even then one isolated positive culture does not necessarily mean an infection. This decision is made by the clinicians depending on the overall situation.

46. The adviser said that he could not be clear from the records when the formal diagnosis was made but he said that finalising the diagnosis and instituting treatment is often a process rather than a one off event. Antibiotics are in fact often started before the results of blood cultures are available.

(d) Conclusion

47. It is not possible to know precisely what caused Mrs A's septicaemia. An infection was recognised by the clinicians before the formal results came back from the laboratory, however, and Mrs A was given antibiotics appropriately. I, therefore, do not uphold this complaint.

48. The Board have accepted the recommendations and will act on them accordingly. The Ombudsman asks the Board to notify her when the recommendations have been implemented.

26 September 2006

Annex 1

Explanation of abbreviations used

Ms C	the complainant
Mrs A	the complainant's mother
The hospital	Glasgow Royal Infirmary
The Board	Greater Glasgow NHS Board
ITU	Intensive Care Unit