

Scottish Parliament Region: Highlands and Islands

Case 200501387: Highland NHS Board

Summary of investigation

Category

Health: Hospitals-oncology; Clinical treatment

Overview

The complainant (Mr C) raised a number of issues regarding the treatment and care provided to his late father (Mr A).

Specific complaints and conclusions

The complaints which have been investigated are that:

- (a) the treatment provided to Mr A was inadequate and this led to him sustaining a chyle leak (*not upheld*);
- (b) staff continued to replace Mr A's TPN lines despite them continually becoming infected (*not upheld*);
- (c) staff failed to ensure Mr A received adequate nutrition (*not upheld*);
- (d) staff failed to clean Mr A's room properly and this led to him becoming infected with MRSA (*no finding*); and
- (e) staff failed to adequately communicate with Mr A's family (*upheld*).

Redress and recommendations

The Ombudsman recommends that the Highland NHS Board (the Board):

- (i) remind staff of their responsibilities under the MRSA policy and ensure procedures are followed and audited for compliance; and
- (ii) remind staff to ensure a note is placed in the records where the patient has specifically refused the release of clinical information to relatives.

The Board have accepted the recommendations and have explained the action which has taken place since the complaint was raised.

Main Investigation Report

Introduction

1. On 24 August 2005 the Ombudsman received a complaint from Mr C about the treatment which his late father (Mr A) received at Raigmore Hospital, Inverness (the Hospital) between August and October 2004. Mr C and members of his family wanted to know what caused a wound leak and why staff continued to replace total parenteral (TPN) lines when they became infected and whether this resulted in Mr A receiving inadequate nutrition. The family also had concerns about the cleanliness of Mr A's room, which they believe resulted in him catching MRSA, and about poor communication from medical and nursing staff.

2. The complaints from Mr C which I have investigated are that:

- (a) the treatment provided to Mr A was inadequate and this led to him sustaining a chyle leak;
- (b) staff continued to replace Mr A's TPN lines despite them continually becoming infected;
- (c) staff failed to ensure Mr A received adequate nutrition;
- (d) staff failed to clean Mr A's room properly and this led to him becoming infected with MRSA; and
- (e) staff failed to adequately communicate with Mr A's family.

Investigation

3. The investigation of this complaint involved obtaining and reading the relevant documentation, including Mr A's clinical records and the complaints correspondence. I sought clinical advice from surgical (Adviser 1) and nursing (Adviser 2) advisers to the Ombudsman. A written enquiry was made of the Board and they provided me with a copy of their policy on procedures relating to MRSA. I have not included in this report every detail investigated but I am satisfied that no matter of significance has been left out. Mr C and the Board have been given the opportunity to comment on the draft of this report. The terms used to describe persons in this report are explained in Annex 1 and a glossary of the medical terms used are explained in Annex 2.

Medical background

4. Mr A was referred for a hospital opinion by his General Practitioner (GP) on 30 June 2004 with persistent throat pain. He was seen by a consultant at Caithness General Hospital (Consultant 1) on 16 July 2004, when a presumed

diagnosis of laryngeal carcinoma was made on clinical examination. He was then referred to the consultant head and neck surgeon at the Hospital (Consultant 2). Mr A subsequently underwent endoscopy and biopsy on 5 August 2004. A CT scan was performed on 11 August 2004 and this confirmed a bulky tumour in the left hemilarynx, associated with a 4.0 x 1.8 x 1.1cm mass in the left neck consistent with metastatic disease. Mr A was reviewed on 12 August 2004, when he was informed of the diagnosis and discussion took place regarding the treatment options available. This discussion is documented in the notes. Mr A opted for surgical treatment, with possible post-operative radiotherapy.

5. A total laryngectomy, thyroidectomy and left modified radical neck dissection were performed on 27 August 2004, with Mr A returning to intensive care post-operatively. His immediate post operative recovery was unremarkable but it was documented on 1 September 2004 that he had developed a low output chyle leak.

6. Although the chyle leak initially began to settle, it recurred and a decision was made on 7 September 2004 to feed Mr A through a central line, with subsequent referral to the dietetic department for total parenteral nutrition. Over the course of several days, the chyle leak increased in volume and his albumin began to fall. On 15 September 2004 Octreotide was commenced in an attempt to limit the chyle leak. On 16 September 2004 concern was raised that Mr A's line may have become infected and swabs subsequently confirmed MRSA. Mr A was commenced on Vancomycin and the line removed. Mr A initially declined insertion of another line but a PICC line was inserted on 20 September 2004 to provide him with peripheral parenteral nutrition. This line tissue on 27 September 2004 and a new line was inserted. This line was also not functioning properly and had to be removed on 29 September 2004. A femoral line was then inserted on 30 September 2004.

7. By 1 October 2004 Mr A had developed a collection in the neck, which was confirmed on ultrasound scan. A specimen from this confirmed MRSA and the Vancomycin, which had previously been stopped, was recommenced. On 5 October 2004 Mr A's albumin had fallen to 17 grams and his femoral line was blocked with a clot and, therefore, removed. On 8 October 2004, a further femoral line was inserted. The chyle leak had now stopped and diet was being slowly introduced. On 12 October 2004, Mr A was noted to be generally unwell. He had developed diarrhoea, fever and was showing signs of generalised

sepsis. His renal function was deteriorating and blood cultures confirmed the presence of gram negative bacilli. Mr A was transferred to the intensive treatment unit and experienced three cardiac arrests requiring full resuscitation before he died in the presence of his family at 01:35 on 13 October 2004.

(a) The treatment provided to Mr A was inadequate and led to him sustaining a chyle leak

8. Mr C complained to the Board that Mr A was admitted to the Hospital in August 2004 for a serious operation, as he had cancer in his voice box and also in his glands which was removed under a nine hour operation. When Mr A had been admitted he had been in very good health, as he had spent the previous month on a healthy diet that had been advised by the dietician. After the operation, he seemed to pull through it very well with no problems and was up and about within a few days. However, about a week after the operation he developed a chyle leak which led to him being unable to eat any solid foods. Mr C wanted to know the cause of the chyle leak.

9. During the local resolution stage of the NHS complaints procedure, the Board's Medical Director (the Director) explained that chyle is a fluid that carries nutrition from the bowel to a large vein on the left side of the neck via a small fragile structure known as the thoracic duct. Mr A developed a chyle leak 48 hours after undergoing surgery for a total laryngectomy and a left modified radical neck dissection. During this type of surgery, the thoracic duct is at risk of being inadvertently injured as it can be difficult to identify. Consultant 2 tried to avoid such a complication during Mr A's operation by tying off the thoracic duct at the time of surgery.

10. Adviser 1 said that Mr A presented with bulky metastatic laryngeal squamous cell carcinoma. There is no record of his height but he weighed only 54.7 kilograms at the time of his surgery, suggesting that he may have been undernourished. He was a heavy smoker and drinker. These factors unfortunately placed him at greater risk of developing post-operative complications. The pre-operative work and the discussion regarding treatment options appear to have been entirely appropriate. The choice of post-operative radiotherapy certainly would have provided Mr A with the best chance of a cure. Mr A unfortunately developed a recognised complication of this type of oncological surgery (chyle leak). Conservative management of this complication with parenteral feeding and nil by mouth is a widely chosen course of action. Surgical intervention is difficult. It can be a challenge to identify the

source of any leak and the adjacent tissues in the neck often become friable and loculated and it is quite possible to make the situation worse. Adviser 1 said there is no hard evidence that Octreotide is effective in this situation but several case reports have supported its use and it was, therefore, not inappropriate to commence this medication under the circumstances. Management of the chyle leak was, therefore, appropriate.

11. Adviser 2 commented that the nursing notes are in the form of daily progress notes, with numerous timed and signed entries being made day by day throughout Mr A's period of care. These records are comprehensive and clearly describe a level of care which met Mr A's needs. They are a continuous record of care through the ITU and the ward areas. There are some care plans which in the main are concentrated on the immediate post-operative period, with the exception of one which relates to Mr A's nutritional state in October 2004. Regrettably, Adviser 2 could not find any further care planning assessments and so she found it difficult to understand how the nursing staff planned their care. Given the problems and potential problems Mr A had, Adviser 2 would have expected care planning to have been ongoing, with regular assessments and planning and evaluation of care. Other documents show regular recording of IV infusions, TPN, fluid balance, TPR and B/P, transfusions, oral food recording. A waterlow risk assessment was also undertaken to assess Mr A's skin integrity, which was low risk.

(a) Conclusion

12. Adviser 1 and Adviser 2 have said that a chyle leak is a recognised complication following the surgical procedure carried out on Mr A. Adviser 1 and Adviser 2 have no concerns about the clinical and nursing care afforded to Mr A and I fully accept their advice and accordingly do not uphold this aspect of the complaint.

(b) Staff continued to replace Mr A's TPN lines despite them continually becoming infected and (c) Staff failed to ensure Mr A received adequate nutrition

13. Mr C complained that, in total, Mr A had six to seven lines inserted within a five to six week period. The first line which became infected with MRSA was inserted in his chest. When that line was taken out, staff started to insert other lines and they too became infected. Mr C felt that by this time staff should have realised this was not going to work and that they should have considered alternative methods. Mr A was waiting periods of time before having the lines

replaced, which meant that he was not receiving nutrition. On one occasion, an infected line was removed on a Friday but it was not replaced until the Monday. Mr C also had concerns that Mr A's treatment concerning the TPN lines was carried out in his room, which had never been cleaned properly. Mr C wanted to know if feeding Mr A through TPN lines was the best treatment option, considering the number of lines which had to be replaced, and whether he received adequate nutrition for a patient who was in poor health.

14. The Director responded that on identifying the chyle leak a decision had to be made on whether to re-explore Mr A's neck surgically, which can be technically very difficult and may not be successful, or to rest the gut by giving nutrition into a vein, TPN. This was discussed with Mr A and he agreed to return to theatre reluctantly. However, the day before the planned operation the chyle leak appeared to subside and, therefore, surgery was deferred. Following this, it was necessary to allow the chyle leak time to settle naturally and so the chyle fluid had to be redirected away from the injured site. In these circumstances, TPN is the only option to provide the patient with nutrition whilst the gut is being rested to allow the thoracic duct time to heal.

15. The Director continued that, as TPN was the only way to provide Mr A with nutrition, it was essential to insert as many lines as necessary to ensure he received the nutrition he required. On 18 September 2004, Mr A's TPN line was removed and unfortunately he would not consent to the insertion of another line until 20 September 2004. The Director gave an assurance that staff would have made every effort to explain to Mr A why this was necessary and in the meantime he was given intravenous fluid to maintain hydration. The Director discussed this with Consultant 2 and it appeared that this relatively short period without nutrition is not likely to have had any significant effects on Mr A's recovery. The volume and composition of Mr A's TPN was tightly controlled, in consultation with the dietetic and pharmacy departments, to ensure that he was receiving the correct nutrition at all times during his treatment. Given that Mr A had been suffering from cancer, which the Director stated was almost certainly related to heavy smoking and alcohol consumption, it is clear that his nutritional reserves would have been depleted prior to his operation. Unfortunately, Mr A's nutritional status would have been reduced further by the surgery he underwent to try and remove his malignancy.

16. The Director said that Mr A received central lines that were inserted into large veins in his neck and groin. These lines were inserted in the operating

theatre, with the first line given under general anaesthetic. A further line into his femoral vein was inserted under local anaesthetic. On reviewing Mr A's medical records, it appeared that the peripheral lines that were inserted into his elbows were applied in his room and he would have been given appropriate pain relief for these procedures. The treatment Mr A received was carried out in the environment that was most appropriate for the procedure or treatment he was receiving at the time. Central lines inserted into Mr A's neck and femoral vein were both carried out in theatre. The risks associated with this procedure require that it is carried out in a well-equipped and sterilised environment. The peripheral lines which were inserted into Mr A's elbows are not considered significantly different from the insertion of a simple venflon or cannula and for this reason they were carried out in Mr A's room.

17. Adviser 1 said that it was unfortunate that Mr A developed an MRSA infection of his line and subsequently of his neck. In her experience, it is known that MRSA infection in head and neck surgical patients can result in very significant complications in terms of wound breakdown and fistula formation. This is further complicated by the fact that head and neck cancer patients often have poor tissues because of their long term smoking and poor diet. Further infection with Klebsiella in a patient compromised by poor nutrition both pre-operatively and post-operatively would result in overwhelming sepsis that medical intervention would be unable to combat despite appropriate antibiotics and other supportive measures. Adviser 1 continued that Mr A experienced a series of complications related to his line all of which are recognised. Unfortunately, these events happened at relatively close intervals so that Mr A was never really able to receive a sustained period of parenteral feeding post-operatively. Adviser 1 noted Mr C's concern about a 48 hour period when Mr A did not have a line and was not receiving nutrition. Given the overall picture of Mr A's progress, Adviser 1 did not feel that this, in isolation, made a significant difference to the outcome. Adviser 1 concluded that Mr A's medical and surgical management was appropriate but a frustrating series of complications, mainly related to venous access, resulted in Mr A receiving nutrition only intermittently, which undoubtedly affected his ability to combat infection.

18. Adviser 2 said it is also reported that the dietician saw Mr A regularly advising on nutrition. Mr A was also having regular physiotherapy. Adviser 2 said the nursing notes clearly state that when Mr A needed insertion or re-insertion of central lines this was done in theatre. This is confirmed by entries in the medical notes. PICC lines were inserted at Mr A's bedside by an

anaesthetist using an aseptic technique. The nursing notes also regularly refer to Mr A's leaking neck wound and how they were treating it and that swabs and specimens for culture were taken frequently as were line tips when they were removed. The nursing notes continue to be comprehensive to the time of Mr A's death. Adviser 2 was satisfied that the level of nursing care given to Mr A was of a satisfactory standard.

(b) Conclusion

19. The advice which I have received and accept is that it was appropriate for staff to insert TPN lines as a method of providing Mr A with nutrition. However, a recognised complication of this treatment is that lines can become infected and coupled with patients whose medical condition leaves them susceptible to infection can lead to the situation which affected Mr A. Accordingly, I do not uphold this aspect of the complaint and the Ombudsman has no recommendation to make.

(c) Conclusion

20. It was inevitable that there would be some delay in Mr A receiving nutrition, due to the fact that his TPN lines became infected and had to be replaced. However, the advice which I have received and accept is that any delays encountered by Mr A would not have had a significant effect on his nutritional state. His medical and surgical management was appropriate and I do not uphold this complaint.

(d) Staff failed to clean Mr A's room properly and this contributed to him becoming infected with MRSA

21. Mr C said that members of Mr A's family visited him in hospital every day to the day he died. At times Mr A had someone with him from 10:00 to 20:00 and at no time was his room cleaned to an adequate standard and on occasions it was not cleaned at all. At times the domestic staff would brush the floor, wipe the sink and leave without entering the bathroom. When MRSA was confirmed only the nursing staff were seen to wear gloves and aprons and it was ridiculous when Mr A caught MRSA a second time. Staff left dishes to pile up before being cleared, soiled towels were left on the bathroom floor and Mr A was allowed to walk around the hospital which increased the risk of others catching MRSA.

22. The Director responded that Mr A became colonised with MRSA or Methicillin Resistant Staphylococcus Aureus. Staphylococcus is a bacterium

found in the noses of 20-30% of normal healthy people, and is commonly found in people's skin. Most of the strains of Staphylococcus Aureus are sensitive to Methicillin type antibiotics (the most commonly used type of antibiotic) but some are resistant to them. These strains are known as MRSA and are more difficult to treat, as common antibiotics do not work against them. On examining Mr A's records, it appeared that the MRSA was located primarily in the discharge from his neck. In view of this information, it would be reasonable to assume that the MRSA found in his bloodstream entered via the line or by bacteria from his surgical wounds. Mr A became infected with MRSA on only one occasion and he was immediately commenced on Vancomycin, a powerful antibiotic used to treat MRSA. During Mr A's admission he was tested regularly by taking swabs from various parts of his body. As his treatment progressed the MRSA would have been eliminated in certain areas, whilst other parts may have been more difficult to treat. In view of this information, Mr C may have perceived that the MRSA had disappeared on hearing that the earlier swab results were negative. However, the MRSA infection would still have been present in other areas and this would have been highlighted in later tests.

23. The Director continued that Mr A was informed that he had MRSA on 7 September 2004 and that the issues surrounding MRSA were discussed with him in the presence of his family. Mr A was given an information leaflet for patients with MRSA and it was recorded that he was satisfied with the explanation which had been given and that the leaflet had answered all of his questions. Given the number of weeks Mr A was a patient on the ward, staff felt it was entirely appropriate to enable him to take some exercise and move around, as long as correct precautions were taken. Prior to leaving his room Mr A was advised about the importance of handwashing to prevent cross infection and he was instructed not to come into contact with patients with surgical wounds at any time.

24. The Director said that the issue of domestic staff not wearing gloves or aprons or not washing their hands on leaving Mr A's room had been discussed with the staff. The domestic staff have confirmed that gloves and aprons were worn at all times and the presumption was made that confusion could have been caused because the gloves and aprons are made from a clear material which would make them less obvious to a casual observer. All domestic staff are instructed to wash their hands on leaving an isolation room except where they were taking a rubbish bag for disposal. Staff recalled that Mr A specifically asked that dishes be left in his room as he had not finished drinking or eating at

a particular time. The Director added that as a complaint about the standard of cleanliness of Mr A's room was not raised at the time he was a patient it is difficult to comment. As a result of the complaint, however, the Domestic Services Manager examined a number of single rooms on the ward and all rooms were found to be cleaned to an acceptable standard and there was no evidence that any of the rooms had not been cleaned for any length of time. It was surmised that Mr A's room would have been cleaned before visitors had arrived but unfortunately nursing and domestic staff did not recall being made aware of these issues at the time.

25. Adviser 2 said that Mr A became MRSA positive and he and his family were informed of this and provided with information. Throughout treatment Mr A was kept informed of all the decisions about his treatment and care by Consultant 2. It was Mr A's wish that all information about his care was to be discussed with him and he would inform his family accordingly. Adviser 2 noted that the nursing notes included references to the chyle leak and that Mr A's positive MRSA status was confirmed on 7 September 2005 and the Infection Control Team was informed. Mr A was also informed as was his daughter. There is also reference to the fact that information was given to Mr A and his family about MRSA which, it is reported, appeared to answer their questions at the time. Adviser 2, however, could find no instructions in the nursing records as to how Mr A would be managed once it was known he was MRSA positive.

26. Adviser 2 subsequently reviewed the MRSA policy provided by the Board. She commented that it is well researched and represents good practice. The policy is explicit that source isolation must be instituted for MRSA affected patients in high, medium and low risk areas by isolating patients into single rooms if possible, cohorting affected patients into a defined area, or transferring them to Ward 11 Raigmore Hospital, a purpose built unit with isolation cubicles and individual toilet facilities. A procedure for barrier nursing isolated patients is explicit within the policy and represents good practice. The procedure explains what precautions visitors must take, although these are minimal unless they are involved in personal care. Adviser 2 was not clear what information was given to Mr A's family about MRSA as there is no patient/carer information included within the policy papers although it is documented that the family were provided with information.

27. Given the robustness of the policy Adviser 2 is disappointed that the nursing staff did not appear to risk assess Mr A or instigate the hospital policy

when planning ongoing care for Mr A when it was suspected he may have had an MRSA infection. Adviser 2 was also critical of the nursing staff in that they make no reference to a referral to the Infection Control Team in their notes once it was known Mr A was MRSA positive. Although she considered the Board should be congratulated on their policy she would criticise the nursing staff in their apparent failure to instigate the procedures so clearly set out in the policy. Adviser 2 recommended that the Infection Control Nurse/Senior Nurse responsible for the ward concerned takes up this issue with the staff to ensure hospital policy is followed and similarly audited for compliance.

(d) Conclusion

28. Clearly there is a difference of opinion as to whether Mr A's room was cleaned to an acceptable standard and whether this could have contributed to the MRSA infection. The problem with issues such as this which are raised after the event is that it makes it extremely difficult to investigate and arrive at firm conclusions. I have not been able to establish evidence that the standard of room cleaning was deficient and accordingly I am unable to make a finding in this regard. I am pleased to note that following receipt of the complaint the Board arranged for the Domestic Services Manager to carry out room inspections and the result was that they were of an acceptable standard.

(d) Recommendation

29. Although this aspect of the complaint has not been upheld Adviser 2 had concerns that it appeared nursing staff failed to risk assess Mr A when it was suspected he had MRSA or document action taken to refer to the Infection Control Team. The Ombudsman recommends that the Infection Control Nurse/Senior Nurse responsible for the ward remind staff of their responsibilities under the MRSA policy and ensure procedures are followed and audited for compliance.

(e) Staff failed to adequately communicate with Mr A's family

30. Mr C complained that all the family were ever told was that Mr A had had an infection but they were not told the type or number of infections. They were not informed of the results of blood tests, therefore, they never actually knew what his condition was.

31. The Director responded that Mr A made it clear from the onset of his treatment that he wished to communicate directly with his family on such issues and this may have contributed to their perception that the family were not

informed about the number and type of infections that he had.

32. Adviser 1 said there is little record in the notes of ongoing communications with the family during Mr A's admission. An area of concern would be whether the family pointed out their concerns as they arose or whether they only did this in retrospect. Adviser 1 felt that better communication between staff and family in both directions might have helped the situation.

33. Adviser 2 reviewed the nursing notes and she too could find little reference to discussion with the family regarding aspects of Mr A's care. However, it was Mr A's wish for all information about his care to be discussed with him and he would advise his family accordingly. Notwithstanding this Adviser 2 has commented that she would have expected a note to that effect to be written in the notes so that all staff were aware of his wishes.

(e) Conclusion

34. According to the Director Mr A wished staff to communicate to him and he would decide which information to share with his family. Staff would have to accept Mr A's wishes and that could be the reason why members of his family felt they were being denied information about his medical condition. It would be appropriate for staff to provide general information about a patient but only release specific information with the patient's permission. However, Adviser 2 has commented that there is little recorded in the notes about discussions with the family and she would have expected a note clearly stating Mr A's wishes so that all staff would be aware. I agree that such an important matter should be recorded in the records so that it can be substantiated and that staff would know not to divulge personal information. In view of the lack of such recording I am minded to uphold the complaint that there was a failure in communications.

(e) Recommendation

35. The Ombudsman recommends the Board reminds staff to ensure a note is placed in the records where the patient has specifically refused the release of clinical information to relatives.

1. The Board have accepted the recommendations and have explained the action which has taken place since the complaint was raised.

27 March 2007

Explanation of abbreviations used

Mr C	The complainant
Mr A	Mr C's father
The Hospital	Raigmore Hospital Inverness
Adviser 1	The Ombudsman's professional surgical adviser
Adviser 2	The Ombudsman's professional nursing adviser
Consultant 1	Consultant at Caithness General Hospital
Consultant 2	The consultant responsible for Mr A's treatment at the Hospital
The Director	The Board's medical director
ITU	Intensive Therapy Unit
TPN	Total parenteral nutrition

Annex 2

Glossary of terms

Albumin	One of the body proteins
Bacilli	A term to describe bacteria
Biopsy	Removal of body tissue for diagnostic examination
Chyle leak	Leakage of chyle fluid from the thoracic duct
CT Scan	Computed Tomography Scan Computerised view of the body's internal structures
Endoscopy	Examination of internal organs by way of an endoscope
Femoral line	Line inserted directly into the femoral vein
Fistula formation	An abnormal connection between an organ, vessel or intestine and another structure
Klebsiella	A form of bacteria
Laryngeal carcinoma	Cancer of the larynx
Laryngectomy	Surgical removal of part or all of the larynx
Metastatic Disease	Cancerous disease spreading from one part of the body to another
MRSA	Methicillin Resistant Staphylococcus Aureus. A type of staphylococcus bacterium which is resistant to the antibiotic methicillin
Octreotide	A drug used to treat diarrhoea and flushing

	associated with certain types of tumours
Radical neck dissection	Surgical procedure to remove cancerous tissue in the head or neck
Sepsis	The presence of bacteria in the blood or tissues
Thyroidectomy	Surgical removal of the thyroid gland
TPN Lines	Administration of nutrition through a vein
Ultrasound scan	Scan using ultrasound to obtain images of organs or tissues within the body
Vancomycin	Antibiotic used to treat bacterial infections
Venflon/Cannula	Small plastic tube which is inserted into a vein using a needle which is then removed. This allows for repeated access to the vein without the need to find another site.
Waterlow risk	Pressure sore risk assessment tool