Scottish Parliament Region: North East Scotland and Highlands and Island

Cases 200501582 & 200501993: Grampian NHS Board and Highland NHS Board

Summary of Investigation

Category
Health: Hospitals: Diagnosis

Overview
The complainant (Mr C) complained about the care and treatment provided to his wife (Mrs C) by both Grampian NHS Board and Highland NHS Board. Mr C said that there was an unreasonable delay in diagnosing Mrs C's condition. This led to a delay in her treatment and Mrs C died.

Specific complaint and conclusion
The complaint which has been investigated is that there was an unreasonable delay in diagnosing Mrs C's condition (*not upheld*).

Redress and recommendation
The Ombudsman has no recommendations to make.

Main Investigation Report

Introduction

1. Mrs C was pregnant with her second child who was expected to be born around 17 July 2005. Mrs C became unwell in December 2004 and she was referred to Raigmore Hospital (the Hospital) for treatment. Following a family holiday Mrs C's GP (General Practitioner) referred her to the Hospital again as she was still unwell and she was admitted. The Hospital was unable to make a clear diagnosis and arranged for Mrs C to be transferred to the Infectious Diseases Unit at Aberdeen Royal Infirmary. Before the transfer could be carried out, however, Mrs C's condition worsened and this deterioration continued following her transfer. Although a diagnosis was finally made and treatment started, Mrs C sadly died on 18 April 2005.

2. Following his wife's death Mr C asked Highland NHS Board for an independent investigation into the circumstances of his wife's death. Highland NHS Board appointed a Consultant Physician and a Consultant in Obstetrics and Gynaecology to review Mrs C's casenotes and provide an opinion. The opinions were sent to Mr C on 10 August 2005.

3. On 9 September 2005 Mr C complained to the Ombudsman about his wife's treatment at both hospitals.

4. The complaint from Mr C which I have investigated is that there was an unreasonable delay in diagnosing Mrs C's condition. The report contains some technical terms which are explained in the glossary of terms at Annex 2.

5. In line with the practice of the Ombudsman's office, the standard by which I have judged the actions of the doctors who looked after Mrs C was whether they were reasonable. By that, I mean whether the decisions and actions taken were within the boundaries of what would be considered to be acceptable practice by the medical profession in terms of knowledge and practice at the time.

6. The Hospital is located in Highland NHS Board. Aberdeen Royal Infirmary is within Grampian NHS Board. Mr C has not made a formal complaint to Grampian NHS Board about his wife's clinical care and they have, therefore, not had the opportunity to respond. In the circumstances, however, I considered it reasonable to exercise the Ombudsman's discretion to accept Mr C's complaint

about both hospitals simultaneously rather than expect him to go through Grampian NHS Board's complaints process.

Investigation

7. In order to investigate this complaint I have had access to Mrs C's hospital records and the complaint correspondence from Highland NHS Board. I have obtained clinical advice which I have accepted from an adviser (the Adviser) to the Ombudsman who is a hospital Consultant. I have not included in this report every detail investigated but I am satisfied that no matter of significance has been overlooked. Mr C, Highland NHS Board and Grampian NHS Board were given an opportunity to comment on a draft of this report.

Complaint: There was an unreasonable delay in diagnosing Mrs C's condition

8. On 16 December 2004 Mrs C attended her GP suffering from pain in her mouth, gum and tongue and with a small painful genital lesion which was slightly ulcerated. The GP took a swab to determine the cause but before the results were known Mrs C returned to the surgery. Her mouth had become more painful and her dentist had arranged for her to see the oral surgeons at the Hospital. The genital ulcer was also larger. Mrs C's GP referred her urgently to the Hospital's Antenatal Clinic. He thought she might have Behcet's disease.

9. Mrs C was seen and treated by the oral surgeons on the same day. In view of the possible diagnosis of Behcet's disease an appointment was arranged at the Hospital's Ophthalmology Department.

10. On 30 December 2004 the Consultant Obstetrician and Gynaecologist (the Consultant) saw Mrs C and took swabs from her vulva for a range of tests. He wrote to Mrs C's GP the following day. He said that her pregnancy was progressing satisfactorily and confirmed her likely delivery date. He said, however, that the more pressing issue was the appearance of signs and symptoms suggestive of Behcet's disease. He described Mrs C as having some recent pain in her right hip, both knees and ankles and having had a slight cough. He said that he did not yet have the results of all the tests he had taken but that routine syphilis, HIV and HepB tests were negative. He referred her to a Consultant Physician for an opinion as to whether Mrs C should be started on steroids.

11. On 11 January 2005 the Ophthalmology Department wrote to Mrs C's GP to say there was no sign of Behcet's disease in either eye.

12. On 26 January 2005 Mrs C was seen by the Consultant Physician and his Specialist Registrar who wrote to the Consultant on the same day. She said that they were considering biopsy of the affected area but advised against steroids given Mrs C's pregnancy.

13. On 16 February 2005 Mrs C had an amniocentesis test because of an increased risk of Down's syndrome. The result was normal.

14. On 28 February 2005 the Consultant Physician wrote to Mrs C's GP. He said that Mrs C had suffered from a low grade fever since the amniocentesis. He said that her mouth showed no active ulceration and he thought the diagnosis of Behcets disease remained in some doubt. He thought, however, that further tests should be put on hold until after her pregnancy although he would arrange a biopsy if further mouth ulcers appeared. He thought Mrs C was well enough to go abroad on holiday.

15. On 21 March 2005 the GP referred Mrs C back to the Hospital. He said that she had recently returned from her visit abroad and had been unwell for four days with PUO (pyrexia of undetermined origin), bilateral renal discomfort and suprapubic tenderness. He had given Mrs C antibiotics but thought she might have pyelonephritis.

16. Mrs C was admitted to the Hospital on the same day. Her temperature was 38.6° and the following day increased to 40°. The provisional diagnosis was pyelonephritis but other possibilities were considered including malaria, hepatitis and virus infection. The following day the Consultant added Behcet's disease and TB to the possibilities. He requested chest x-ray and sputum examination. The x-ray was reported on 7 April 2005 but was seen by the clinical team before that. On 25 March 2005 it was described in the clinical notes as NAD (nothing abnormal discovered).

17. By 23 March 2005 Mrs C had a fever to the level that can cause miscarriage if untreated. She was treated with antibiotics but she continued to have a raised temperature. Mrs C had a range of tests but nothing was found which could explain the fever.

18. On 27 March 2005 a different antibiotic was started. Further tests were taken including sputum for TB examination and repeat blood cultures.

19. On 29 March 2005 the Consultant noted the TB tests were negative. He asked the Consultant Physician to review Mrs C. The Consultant Physician felt that infection still required to be ruled out.

20. Mrs C then developed right hand chest pain and skin irritation followed by a rash. The chest x-ray was repeated but the results were unchanged. Ultrasound of the abdomen revealed nothing untoward and autoantibody tests were negative.

21. On 1 April 2005 the Consultant arranged for Mrs C to be transferred to the Infectious Diseases Unit at Aberdeen Royal Infirmary. That afternoon, however, before the transfer had taken place, Mrs C developed a droopy left eyelid which was associated with weakness of the left arm and leg. It was thought that this could indicate vasculitis and Mrs C was given a steroid and an urgent CT brain scan. The scan showed no haemorrhage (bleeding) or infarction (an area where the tissue is dead).

22. A lumbar puncture, however, finally revealed that Mrs C was suffering from TB meningitis.

23. Mrs C was now semi-conscious and treatment was started with antituberculosis drugs and steroids. Her general condition was poor and the following day she worsened with lung and chest problems.

24. Mrs C was transferred to the Intensive Therapy Unit of Aberdeen Royal Infirmary and was ventilated (helped to breathe with a machine). Over the following two weeks, however, she continued to decline. On 18 April 2005 Mrs C's heart stopped. The baby was born by emergency Caesarean section but sadly Mrs C was subsequently pronounced dead.

25. Mr C complained that time was wasted doing the wrong tests, that Mrs C's earlier symptoms were not recognised and there was unreasonable delay in making the diagnosis. As a result treatment was started when it was too late and his wife died. He asked why a lumbar puncture had not been done sooner and why a TB skin test had not been done.

26. The Adviser has given me detailed advice on these matters. The Adviser said that Mrs C first complained of ulceration of the mouth and genitals. When she saw the Consultant he noted that she also had recent pain in her hip, knees and ankles. The Adviser said that it was reasonable at that stage to suspect that Mrs C was suffering from Behcet's disease as all of those symptoms are common symptoms of Behcet's disease. Behcet's disease is a rare condition characterised by oral and genital ulceration and eye inflammation. Other organs such as joints, skin and intestine can be affected. The Consultant arranged for Mrs C to be seen by the Ophthalmic department to check for problems with her eyes.

27. On 11 January 2005 it was found that Mrs C has no sign of Behcet's disease in her eyes. This, and the persistent high fever, made Behcet's disease less likely and Mrs C was referred to a Consultant Physician. By the end of February 2005, however, Mrs C had no ulceration in her mouth and it was felt that she was well enough to go on holiday. The Consultant Physician, therefore, recommended that further tests be postponed until after the baby was born unless new ulcers appeared. The Adviser said that there had been a suggestion that Mrs C's genital ulcer could have been biopsied but that had not been pursued. The Adviser said that he could not say whether this would have provided the answer as it was never established whether this ulcer was tuberculous, although as it appeared to have resolved spontaneously this made it unlikely. He, therefore, considered that the Consultant Physician's opinion that Mrs C was both well enough to go on holiday and further tests could be postponed until after the baby was born was reasonable.

28. When Mrs C returned from holiday she went back to her GP. Her symptoms at that stage were fever, sore kidneys and tenderness above her pubic area. Her GP started her on antibiotics and referred her back to the Hospital. His provisional diagnosis was pyelonephritis. The Adviser said that Mrs C's symptoms fitted with the GP's provisional diagnosis.

29. Mrs C was admitted to the Hospital on 21 March 2005. The Adviser said that Mrs C had a fever, the cause of which was very difficult to determine. In such cases the method used to come to a conclusion about the cause of the problem is differential diagnosis. By that method one would consider everything that could be causing the symptoms and try to exclude each by clinical tests. The question in this case is whether the appropriate possibilities were

considered, whether the appropriate tests were done and whether the diagnosis could have been made sooner.

30. The provisional diagnosis was pyelonephritis but other possibilities were considered including malaria, hepatitis, virus infection, Behcet's disease and TB.

31. The Consultant requested a chest x-ray and sputum examination. The Adviser noted that the x-ray was reported as 'nothing abnormal discovered' but said that was a reasonable interpretation since the subsequent report described only vague changes which could well be interpreted as being within normal limits.

32. Over the following few days Mrs C had blood tests and it was found that her white blood cell count was not raised but the CRP (C-reactive protein) was slightly raised at 14 (normal is 0 – 9). The Adviser said that the CRP is usually raised if there is an infection. The Adviser said that all the appropriate investigations were done including urine and blood culture and virus tests for glandular fever and CMV but all the results were negative. Further specimens were obtained including sputum for TB examination and repeat blood cultures but they were also negative.

33. The Consultant asked the Consultant Physician to review Mrs C but the Consultant Physician thought that there was insufficient evidence to diagnose inflammation of either the cardiovascular or lymphatic systems and he felt that infection still required to be ruled out. The Adviser said that this conclusion was reasonable given the information available at the time. The Adviser also said that a lumbar puncture would normally only be indicated if it was suspected that there was a problem with the patient's brain or spinal cord. The Adviser said that Mrs C did not appear to have any symptoms at this stage which would indicate that a lumbar puncture should be done.

34. Mrs C developed some right sided chest pain and some skin irritation followed by a rash. Chest x-ray was repeated but the findings were unchanged. Ultrasound of the abdomen revealed nothing and autoantibody tests were negative. It was decided at that stage to ask for an opinion from the Infectious Diseases Unit at Aberdeen Royal Infirmary and arrangements were made for her to be transferred there.

35. Before Mrs C could be transferred, however, she developed further symptoms. She had a droopy left eyelid which was associated with weakness of her left limbs. It was the appearance of these neurological symptoms which led to the decision to do a lumbar puncture. The lumbar puncture results were characteristic of TB meningitis.

36. The Adviser said that it is easy in retrospect to fit all the clinical features together and see that from the beginning Mrs C was suffering from TB. All of the tests done for TB up to that point, however, including chest x-ray, microscopic examination of sputum and sputum culture were negative. The Adviser said that the usual symptom of TB meningitis is persistent headache but there is no mention in the clinical records that Mrs C suffered from a headache at any stage. That made it even more difficult for the doctors to diagnose TB meningitis.

37. It was not until 12 April 2005 that a sputum culture proved positive for TB, some 11 days after the lumbar puncture. The Adviser noted that Mr C had asked why a skin test for TB had not been carried out but the Adviser said that test is not now regarded as useful as a positive result does not necessarily mean the patient has TB and a negative result does not exclude it.

38. The Adviser said that the origin of Ms C's TB is not known but it is clear that she had it for some time. The Adviser said that the fever which Ms C developed in March 2005 was probably due to miliary TB in which there is bloodstream spread of TB bacteria. The diagnosis of military TB is very difficult because TB cannot be grown from blood culture. Because it is spread in the bloodstream many of the organs of the body can be involved. In Ms C's case it is probable that TB spread to the membranes surrounding the brain and spinal cord very late in the disease in late March 2005. Had meningitis been present before this, symptoms such as a headache would have been expected.

39. The Adviser said that it is extremely difficult to know whether the outcome would have been any different had antituberculosis treatment been started sooner. He said that had there been any reason to start the treatment two or three weeks earlier then that might have been effective but treatment, say, during the last week of her stay at Inverness would probably not have affected the outcome.

Conclusion

40. This is a very sad case in which Mr C lost his wife and two children lost their mother. Mrs C was suffering from a rare condition which was not diagnosed until it was too late to treat her effectively. Mrs C's symptoms varied as the disease progressed and her doctors considered a range of possible causes which attempted to explain her symptoms. During the period prior to her diagnosis tests were carried out to try to determine which of these causes was most likely. I can see from the clinical notes that TB was considered as a possible cause from the second day of her admission to hospital but although the appropriate tests were carried out the results were negative. Mrs C did not have the persistent headache normally associated with TB meningitis. It was, therefore, not possible to conclude on the basis of the evidence available at that time that Mrs C was suffering from TB meningitis.

41. I can understand why Mr C thinks that the lumbar puncture should have been carried out earlier but I am satisfied that prior to 1 April 2005 Mrs C did not appear to have any symptoms relating to her brain which would warrant a lumbar puncture being done. I accept the Adviser's view that a skin test for TB would not have provided any useful information. I am, therefore, satisfied that although the outcome was so tragic the measures taken to try to diagnose what Mrs C was suffering from were appropriate. I note the Adviser's view that if the diagnosis could have been made sooner and treatment started earlier the outcome may have been different. However, in these circumstances where Mrs C did not have symptoms which were typical of TB meningitis and the test results for TB were negative it was reasonable for other causes to be considered until the result of the lumbar puncture made the situation clearer. I, therefore, do not uphold this complaint.

20 June 2007

Annex 1

Explanation of abbreviations used

Mrs C	The complainant's late wife
The Hospital	Raigmore Hospital
GP	General Practitioner
Mr C	The complainant
The Adviser	The Ombudsman's Independent Professional Adviser
The Consultant	The Consultant Obstetrician and Gynaecologist

Annex 2

Glossary of terms

Amniocentesis	Sampling of the fluid in the amniotic sac carried out, between the 12th and 16th week of pregnancy, by inserting a needle through the abdominal wall into the uterus.
Autoantibody	An antibody which reacts with a normal component of the body. A sign that SLE may be present.
Bacteriology	The department which studies bacteria and bacterial diseases
Behcet's disease	A multisystem, chronic recurrent disease characterised by ulceration in the mouth and genitalia, iritis, (Inflammation of the iris), uveitis, (inflammation of the middle eye), arthritis (inflammation of the joints), and thrombophlebitis (Inflammation of a vein).
CMV (cytomegalovirus)	A virus which normally causes disease in the womb
CRP (C-reactive protein)	A protein, high levels of which can indicate infection. (Normal is 0 – 9 milligrams per litre)
Differential diagnosis	The determination of which of two or more diseases with similar symptoms is the one from which a patient is suffering, based on an analysis of the clinical data

HIV (human immunodeficiency virus) and HepB (a form of viral hepatitis, known as serum hepatitis) tests	Routine tests for conditions which can be passed from mother to child
Ophthalmology	The eye department
Pyelonephritis	Inflammation of the kidney and pelvis, due to bacterial infection
Pyrexia	Fever or abnormal elevation of the body temperature
Renal	Pertaining to the kidneys.
SLE (systemic lupus erythematosus)	A disease where the body attacks its own cells and tissues, causing inflammation, pain, and possible organ damage
Syphilis, HIV and HepB tests	Routine tests for syphilis, a bacterial infection which normally affects the genitals, HIV, the virus which causes AIDS and Hepatitis B, a viral infection which can damage the liver
TB (tuberculosis)	Infection caused by a species of Mycobacterium Tuberculosis is transmitted from person to person by an aerosol of organisms suspended in tiny droplets that are inhaled

TB meningitis	A rare form of meningitis that happens when tuberculosis bacteria invade the membranes and fluid surrounding the brain and spinal cord. The infection usually begins elsewhere in the body and then travels through the bloodstream to the meninges where small abscesses (called microtubercles) are formed. When these abscesses burst, TB meningitis is the result
The meninges	The membranes surrounding the brain and spinal cord
Uveitis	Inflammation of part of the eye
Vasculitis	Inflammation of either the cardiovascular or lymphatic systems
Virology	The department which studies viruses and viral diseases
White blood cell count	A laboratory test which measures the number of white blood cells per cubic millimetre of blood. A high count can indicate infection.