Scottish Parliament Region: Glasgow

Case 201302879: Greater Glasgow and Clyde NHS Board

Summary of Investigation

Category

Health: Hospital; Neurosurgery

Overview

The complainant (Mrs C) complained that a delay in carrying out a Magnetic Resonance Imaging (MRI) scan resulted in her being left with permanent nerve damage, muscle wastage and bladder problems.

Specific complaint and conclusion

The complaint which has been investigated is that staff at the Southern General Hospital, Glasgow failed to assess Mrs C's symptoms as requiring an urgent MRI scan (*upheld*).

Redress and recommendations

The Ombudsman recommends that Greater Glasgow and Clyde NHS Board:	*Completion date*
(i) apologise to Mrs C for the failings identified in this report; and	24 October 2014
(ii) ensure that proper and accurate records are kept of telephone referrals made to the Department of Neurosurgery and this report is shared with the relevant staff.	24 December 2014

The Ombudsman recommends that Greater Glasgow and Clyde NHS Board and Lanarkshire NHS Board:	
(iii) take steps to implement appropriate protocols, policies or guidance in order to regulate MRI scanning and spinal surgery referrals.	24 December 2014

Greater Glasgow and Clyde NHS Board and Lanarkshire NHS Board have accepted the recommendations and will act on them accordingly.

Main Investigation Report

Introduction

1. On Saturday 21 July 2012 Mrs C attended the Accident and Emergency (A&E) department of Monklands Hospital (Hospital 1), having awoken to find that her leg, foot and buttock were numb. She also had lower back pain and had no feeling when she urinated. Mrs C had previously attended at her general medical (GP) practice suffering from back pain. She was admitted to Hospital 1 with a possible diagnosis of cauda equina syndrome. As magnetic resonance imaging (MRI) scans were not carried out at weekends and out-of-hours at Hospital 1, specialist advice was sought from the Institute of Neurosciences, Department of Neurosurgery (Department of Neurosurgery) at the Southern General Hospital, Glasgow (Hospital 2). There was a discussion with the on call neurosurgical doctor at Hospital 2 on 21 July 2012. An MRI scan was carried out on Monday 23 July 2012 at Hospital 1. The MRI scan showed that Mrs C had a large prolapsed disc. Mrs C was transferred to Hospital 2 the same day, 23 July 2012, and underwent a bilateral L5/S1 microdiscectomy on 24 July 2012.

2. Mrs C considered that her symptoms should have been treated as a medical emergency and complained that the decision to delay an MRI scan for two days resulted in her being left with permanent nerve damage, muscle wastage and bladder problems. Mrs C, therefore, wished Greater Glasgow and Clyde NHS Board to admit that the MRI scan should have been carried out within 24 hours of her attendance at Hospital 1.

3. The complaint from Mrs C which I have investigated is that staff at Hospital 2 failed to assess her symptoms as requiring an urgent MRI scan.

Investigation

4. During the course of the investigation of this complaint, my complaints reviewer examined copies of Mrs C's clinical records from both Hospital 1 and Hospital 2 and their complaint correspondence. In addition, my complaints reviewer also examined the information that Mrs C provided to my office. Independent clinical advice was also obtained from a professional medical adviser, a consultant neurosurgeon (the Adviser).

5. 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 Greater

Glasgow and Clyde NHS Board were given an opportunity to comment on a draft of this report. In addition, Lanarkshire NHS Board, who have responsibility for Hospital 1, were also given an opportunity to comment on the draft report.

Complaint: Staff at Hospital 2 failed to assess Mrs C's symptoms as requiring an urgent MRI scan

6. When Mrs C awoke on the morning of 21 July 2012, she found that her leg, foot and buttock were numb; she had lower back pain; and there was no feeling when she urinated. In addition, Mrs C had suffered back pain during the previous week. Mrs C was taken, by ambulance, to the A&E department at Hospital 1. According to Mrs C, when she told a doctor in A&E that she had no feeling when she had urinated earlier, the doctor told her that he would speak to an orthopaedic surgeon as he was concerned that she could have cauda equina syndrome. Mrs C was told she would be catheterised and admitted to a ward. She was also advised that she would require an MRI scan but as this imaging service was not available at Hospital 1 at weekends she would, therefore, need to wait to have a MRI scan on 23 July 2012. However, her case would be discussed with staff at Hospital 2 as to whether or not to transfer her to Hospital 2 earlier for a MRI scan to be carried out there.

7. Mrs C was advised that it had been decided that a MRI scan could wait over the weekend and so Mrs C remained in Hospital 1. The MRI scan took place at Hospital 1 on 23 July 2012. Mrs C says she was told the MRI scan had shown she had a large prolapsed disc sitting on nerves and she was being transferred to Hospital 2 that same day as surgery would be required to remove the disc.

8. Mrs C said she was concerned that the decisions made by medical staff had a detrimental impact on her health and she should have been treated as a medical emergency. Mrs C said she believed that if an MRI scan had been carried out on 21 July 2012 she would not be left with the long term effects of cauda equina syndrome, complete numbness in her left leg from her buttock down to the sole of her foot, bladder problems and a disturbed sleep pattern which impacted on her ability to function during the day.

Responses to the complaint from Lanarkshire NHS Board and Greater Glasgow and Clyde NHS Board

Lanarkshire NHS Board Response

9. Lanarkshire NHS Board stated that Hospital 1's MRI scanner was not staffed at weekends and out-of-hours as it was not often required for emergencies. The function was usually covered by plain films, ultrasound and computerised tomography scan scanning. When emergency MRI scanning was required at weekends, clinicians from Lanarkshire NHS Board contacted the relevant clinicians from Greater Glasgow and Clyde NHS Board, usually at Hospital 2. A decision was then made, based on the patient's symptoms and signs, as to whether to transfer the patient to a Glasgow hospital for scanning at the weekend. The decision was a clinical one and not normally one a radiologist would be involved in. Lanarkshire NHS Board also explained that they do not have a spinal surgery service and all patients who present to them requiring this service are referred to the Department of Neurosurgery at Hospital 2, whose instruction and/or advice is followed.

10. Following Mrs C's admission to Hospital 1, a diagnosis of cauda equina syndrome was made. Mrs C's case was immediately discussed with the on call neurosurgical doctor at Hospital 2 on 21 July 2012, who advised that a MRI scan could wait to be carried out until 23 July 2012 at Hospital 1.

Greater Glasgow and Clyde NHS Board Response

11. In response to Mrs C's complaint, Greater Glasgow and Clyde NHS Board stated that the consultant neurosurgeon (Consultant 1) at the Department of Neurosurgery at Hospital 2 who had been on call during the weekend of 21 July 2012 had recorded the following information regarding the referral received from Hospital 1 concerning Mrs C. It stated: 'LBP radiating to Lt leg. Normal sphincter function? Decreased perianal sensation'. This meant there was lower back pain spreading to the left leg; there was normal bowel and bladder control at the time; and there was a query regarding the possibility of a reduced sense of feeling around the back passage. The advice which was given to Hospital 1 was recorded as 'MRI locally', meaning that an MRI scan should be carried out at the local hospital, Hospital 1.

12. Mrs C had then been admitted to Hospital 2 on 23 July 2012 with acute incomplete cauda equina syndrome under the care of a different consultant neurosurgeon (Consultant 2) who was the on-call neurosurgeon that day. Greater Glasgow and Clyde NHS Board said that more detail would be recorded on a related slip in the on call log book, which was normally kept within the Department of Neurosurgery at Hospital 2. They explained that the log book contained details of all telephone calls received by the on call

neurosurgical team regarding patients. The log book for the relevant period which concerned Mrs C had been removed for audit purposes and had not yet been returned to the Department of Neurosurgery. Mrs C was subsequently advised that there would be a delay in the return of the log book, as a member of staff was on long term leave and they were unable to locate the records.

13. The log book was subsequently located. Greater Glasgow and Clyde NHS Board supplied my office with a copy of the entry relating to Mrs C, which according to Greater Glasgow and Clyde NHS Board 'contain[ed] all the information from the log book held for [Mrs C]'. The entry refers to a referral telephone call from Hospital 1 on 23 July 2012 concerning Mrs C, the day of her admission to Hospital 2; there is no entry for 21 July 2012.

14. Greater Glasgow and Clyde NHS Board, in response to an enquiry from my office, stated there was no written Department of Neurosurgery policy for out-of-hours imaging. They referred to the Society of British Neurological Surgeons guidance which states that local policies should be in place for imaging at the referral end. Greater Glasgow and Clyde NHS Board also stated that they did not have a responsibility to provide out-of-hours MRI scanning for the entire West of Scotland; the local health board should have a mechanism in place for arranging that. All emergency referrals were discussed with the consultant on call, who then made an individual clinical decision. The individual clinical circumstances would have been discussed with the consultant on call, who would have made a decision based on the available information.

Advice obtained

15. Advice was obtained from the Adviser, a consultant neurosurgeon with experience in patients with spinal problems.

16. The Adviser explained to my complaints reviewer that cauda equina syndrome is typified by numbness in the perineal region and loss of control of the bladder, and sometimes bowel, in the presence of severe back and leg pain. The most common cause for this is a disc prolapse. According to the Adviser, although back pain and sciatica are very common conditions, cauda equina syndrome is exceedingly rare and can be quite difficult to diagnose. It is thought to occur in less than one per cent of people with lumbar disc disease. It is generally agreed that cauda equina syndrome is a surgical emergency but a clear understanding of which patients have cauda equina syndrome and which patients will benefit from urgent scanning and surgery is not firmly established.

17. A change in bladder or bowel habits in the presence of severe back and leg pain is not unusual. However, bladder symptoms and subjective perineal numbness can be caused by many other factors including the severe pain itself and the effects of pain medications. It is very rarely a straightforward situation. Often patients will complain of numbness and perhaps slight difficulty initiating urination, which comes and goes. If a patient has obvious incontinence or retention of urine then the situation is simple, but that is rare and most patients present in a grey area in between. Deciding when to scan a patient as an emergency is, therefore, rarely easy.

18. The Adviser noted that Mrs C began suffering with back pain about six weeks prior to her admission to Hospital 1, with the pain worsening during the week prior to her admission to Hospital 1 on 21 July 2012. An examination of Mrs C in A&E by a junior doctor showed decreased pinprick in her left leg and perianal region, especially on the left side. It was noted that Mrs C had 'unexpected laxity of anal tone'. According to the Adviser, the doctor who had assessed Mrs C had clearly recognised the significance of these findings and contacted the local orthopaedic surgeon on call. Although the Adviser could find no note in Mrs C's medical records that the surgeon saw her, it was recorded that there was a plan to catheterise Mrs C and contact the Department of Neurosurgery at Hospital 2. However, the Adviser told my complaints reviewer that it was not clear what information was given to the on call neurosurgeon at Hospital 2.

19. On 22 July 2012 it was recorded that Mrs C was 'able to pass water and control flow prior to catheterisation'. This, according to the Adviser, suggested that Mrs C's bladder function was normal at that time and, in the Adviser's opinion, was a good illustration of how confusing it can be to accurately diagnose cauda equina syndrome.

20. An MRI scan was carried out on 23 July 2012, which showed that Mrs C had a large disc prolapse at the L5-S1 level that extended up behind the body of L5. According to the Adviser, the disc was certainly large enough to cause Mrs C bladder problems.

21. My complaints reviewer asked the Adviser whether he considered, given Mrs C's symptoms, that it was reasonable to delay the MRI scan and her admission to Hospital 2 until 23 July 2012. The Adviser said that he did not

consider the situation in Mrs C's case was entirely clear concerning a diagnosis of cauda equine syndrome. Although Mrs C had passed urine normally prior to catheterisation on the day of her admission to Hospital 1, on the other hand, there was clear evidence that Mrs C had sensory loss in the perineum and perhaps most persuasively loss of anal tone. According to the Adviser, in most neurosurgical departments any mention of urinary difficulties in the context of severe back pain warrants a scan, even if this means transfer to another hospital. The Adviser was, therefore, in no doubt, based on Mrs C's symptoms, that he would have recommended that Mrs C be transferred to the Department of Neurosurgery at Hospital 2 for urgent scanning on 21 July 2012, the day of her admission to Hospital 1.

22. The Adviser told my complaints reviewer that there is room for genuine difference of opinion, especially if the use of resources is considered. However, the Adviser was of the view that the majority of neurosurgeons would have considered that Mrs C needed to be scanned urgently. The Adviser said that he considered that most neurosurgical units would have recommended urgent scanning on the day Mrs C was admitted to Hospital 1. In order to avoid similar cases in the future, the Adviser told my complaints reviewer that he considered the threshold for scanning patients should be lowered.

23. The Adviser explained that it is rare for a patient who presents with true cauda equina syndrome to make a completely full recovery. The Adviser explained that the nerves to the bladder and those that carry sensation from the skin are very sensitive to pressure and often do not recover fully. Many patients are left with some numbness of the legs or perineal region and some, perhaps, have mild affectation of the bladder function even in the best of circumstances.

24. The Adviser told my complaints reviewer that, while neither Scottish Intercollegiate Guidelines Network or National Institute for Health and Care Excellence provide any guidance with regard to the timing of surgery in cauda equina syndrome and there is a range of opinion about this, the British Society of Neurological Surgeons published a standard of care for suspected cauda equina syndrome in 2009. This states that:

> 'access to a 24 hour MRI scanning service must be available for patients with suspected cauda equina syndrome … decompressive surgery should be undertaken immediately whenever the clinical and radiologic assessment indicates that long term neurologic morbidity reduced.

Nothing is to be gained by delaying surgery and potentially much to be lost'.

25. Mrs C told my office that she has been left with permanent nerve damage, along with muscle wastage and bladder problems. My complaints reviewer asked the Adviser whether the decision to delay the MRI scan for two days led to or contributed to this outcome. The Adviser noted that according to a letter of 22 November 2012 from Consultant 2 to Mrs C's GP, her bladder control 'had largely recovered' and she was able to have a full control of her bladder but had increased frequency, along with a sensation of incomplete evacuation. This, according to the Adviser, suggested that Mrs C's bladder control was not perfect. The Adviser has told my complaints reviewer that this is unfortunately often the case and it is unusual for patients not to have bladder problems after a disc prolapse such as Mrs C had suffered.

26. This letter also stated that Mrs C had 'partial weakness of plantar flexion on the left side'. This, according to the Adviser, implied that there was continuing nerve damage to the muscle although it would normally be expected that Mrs C's motor strength would gradually improve over a period of two years. Only then will the long term prognosis be clear. However, in the view of the Adviser, it was simply impossible to say with any certainty that the outcome for Mrs C would have led to a better outcome for her if the surgery had been carried out earlier.

27. I have reviewed the Society of British Neurological Surgeons guidelines on 'Standards of Care for Established and Suspected Cauda Equina Syndrome', which have been referred to by the Adviser in his advice to me and also by Greater Glasgow and Clyde NHS Board as referred to paragraph 14. The guidance states:

'Delays in the recognition, investigation, and referral for specialist care and surgery for patients with cauda equina syndrome (CES) are a major cause of serious and potentially avoidable neurological morbidity. The clinical assessment of patients with suspected CES is difficult. The definitions below seem clear but there is a need for sound clinical judgment. The majority of patients with suspected cauda equina syndrome will not have critical neural compression and in practice, it is only possible to exclude treatable CES by appropriate imaging.

Definitions:

1. Cauda Equina Syndrome with retention (CESR). Back pain with unilateral or bilateral sciatica, motor weakness of the legs, sensory disturbance in the saddle region, loss of anal tone and established loss of urinary control i.e. painless retention and overflow.

2. Incomplete Cauda Equina Syndrome (CESI). As above but with altered urinary sensation e.g. loss of desire to void, diminished sensation, poor stream, and need to strain. Painful retention may precede painless retention in some cases.

3. Suspected Cauda Equina Syndrome (CESS). Cases of severe back and leg pains with variable neurological symptoms and signs, and a suggestion of sphincter disturbance.

Imaging

MRI scanning is the preferred imaging modality and should be performed without delay to establish the cause of the symptoms. As with CT scanning for head injury, clinical criteria alone will not accurately identify all cases of CES - 70% of cases with suspected CES do not show central disc prolapse (local audit).

Standard of care

- All cases of suspected CES should be referred to and assessed at the local Emergency Department or orthopaedic/neurosurgical service depending on local facilities and arrangements.
- All Emergency Departments receiving patients with suspected CES should have an agreed protocol with their spinal service for the assessment, imaging and referral of CES cases.
- The need for MRI scanning should be established and performed locally if at all possible. Access to a 24 hour MRI scanning service must be available for patients with suspected cauda equina syndrome.
- If cauda equina compression is confirmed by MRI scan, the local neurosurgical or orthopaedic spine unit must be informed immediately and the images made available.
- The patient should be transferred directly to this unit with appropriate documentation and images.

- Decompressive surgery should be undertaken immediately whenever the clinical and radiological assessment indicates that long-term neurological morbidity might be reduced. Nothing is to be gained by delaying surgery and potentially much to be lost.

Counseling
All patients undergoing surgery for CES should be counselled that the aim of surgery is to preserve that function present at the time of surgery. There is scope for improvement but there is a small risk of making matters worse including paralysis of the legs, complete loss of bladder and bowel control and impotence/sexual dysfunction.

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Conclusion

28. The handwritten entries made in Mrs C's medical records for Hospital 1 on 21 July 2012 clearly show that doctors at Hospital 1 suspected that Mrs C had cauda equina syndrome. One entry, in particular, is clearly marked important next to the diagnosis of cauda equina syndrome.

29. Mrs C's medical records for Hospital 1 also show that shortly after her admission contact was made by telephone with a doctor from the Department of Neurosurgery at Hospital 2 who, according to Mrs C's medical records, would call back after discussion with a consultant. There is then a further entry in the medical notes for the same day which states 'discuss with … at SGH [Southern General Hospital] incomplete cauda equina has 72 hours window to operate. Advise to get MRI on Monday at [Hospital 1].'

30. Greater Glasgow and Clyde NHS Board have provided information which they say Consultant 1 recorded on 21 July 2012, as referred to in paragraph 11. According to an internal email provided by Greater Glasgow and Clyde NHS Board to my office, Consultant 1 also stated 'there should be more information' recorded in the on call log book for this day.

31. However, the copy of the log book entry supplied to my office refers to a referral telephone call made by Hospital 1 on 23 July 2012. Greater Glasgow and Clyde NHS Board have not produced either a copy of the actual written record made by Consultant 1 on 21 July 2012 or the log book entry which should have been made about Mrs C on the same day. It also appears from the

handwritten notes in Hospital 1's medical records that Consultant 1 did not speak directly with the doctor at Hospital 2. It is, therefore, unclear from the evidence provided to my office exactly what Consultant 1 was told about Mrs C's condition and by whom. I regard this as unsatisfactory and a clear failing. Nevertheless, given the entries in Mrs C's medical notes at Hospital 1, I consider it highly unlikely that the doctor from Hospital 1 would have failed to have advised the doctor at Hospital 2 on 21 July 2012 that Mrs C had suspected cauda equina syndrome. Accordingly, I consider that the Department of Neurosurgery at Hospital 2 were, therefore, made aware that Mrs C had suspected cauda equine syndrome on 21 July 2012.

32. The clinical advice that I have received from the Adviser is that cauda equina syndrome is exceedingly rare and can be difficult to diagnose. However, although the Adviser considered the diagnosis in Mrs C's case was not entirely clear, he was in no doubt that he and the majority of neurosurgeons would have recommended that Mrs C be urgently scanned on Saturday 21 July 2012. Therefore, I am satisfied that staff at Hospital 2 failed to assess Mrs C's symptoms as requiring an urgent MRI scan. Accordingly, I uphold the complaint.

33. Given the seriousness of Mrs C's condition and the potential implications for her, it is of concern that no actual records of the discussions which took place between Hospital 1 and Hospital 2 on 21 July 2012 concerning Mrs C have been produced by Greater Glasgow and Clyde NHS Board. The importance of clear and accurate record-keeping by clinicians involved in a patient's care are paramount, particularly, as in the case of Mrs C, where more than one hospital and doctor is involved in that decision. It is apparent this did not occur in the case of Mrs C. I am, therefore, critical of Greater Glasgow and Clyde NHS Board concerning the records kept by Hospital 2 on 21 July 2012, which led to the decision to delay carrying out a MRI scan for two days. While Hospital 1 have kept handwritten records concerning the referral of Mrs C to Hospital 2, I also consider more formal records should have been made by Hospital 2 of the communications between the two hospitals.

34. Greater Glasgow and Clyde NHS Board have told my office that there is no written Department of Neurosurgery policy for out-of-hours imaging and they consider the local health board should have a mechanism in place for arranging that. Given that Hospital 1's MRI scanner is not staffed at weekends and out of hours, and as all patients who present to them requiring spinal surgery are

referred to the Department of Neurosurgery at Hospital 2 whose instruction and or advice is followed, I am concerned that no formal protocols, policies or guidance appear to have been put in place by the two health boards to regulate this. I have, therefore, made a recommendation to address this.

35. I note that, unfortunately, Mrs C continues to suffer ongoing problems following her surgery. I appreciate how distressing this must be for her. However, the advice that I have received is that it is impossible to say with any certainty that the outcome for Mrs C would have led to a better outcome for her if the surgery had been carried out earlier.

Recommendations

36. I recommend that Greater Glasgow and Clyde NHS Board:	*Completion date*
(i) apologise to Mrs C for the failings identified in this report; and	24 October 2014
(ii) ensure that proper and accurate records are kept of telephone referrals made to the Department of Neurosurgery and this report is shared with the relevant staff.	24 December 2014

37. I recommend that Greater Glasgow and Clyde NHS Board and Lanarkshire NHS Board:	
(iii) implement appropriate protocols, policies or guidance in order to regulate MRI scanning and spinal surgery referrals.	24 December 2014

38. Greater Glasgow and Clyde NHS Board and Lanarkshire NHS Board have accepted the recommendations and will act on them accordingly. The Ombudsman asks that the boards notify him when the recommendations have been implemented.

Annex 1

Explanation of abbreviations used

Mrs C	the complainant
A&E	Accident and Emergency department of Monklands Hospital
Hospital 1	Monklands Hospital
GP	Mrs C's general medical practice
MRI scan	a magnetic resonance imaging scan
Department of Neurosurgery	Institute of Neurosciences, Department of Neurosurgery Southern General Hospital, Glasgow
Hospital 2	Southern General Hospital, Glasgow
The Adviser	a consultant neurosurgeon who provided advice
CT scan	a computerised tomography scan
Consultant 1	the on call neurosurgeon at Hospital 2 on 21 July 2012
Consultant 2	the on call neurosurgeon at Hospital 2 on 23 July 2012

Annex 2

Glossary of terms

Cauda equina syndrome	a condition caused by compression of the nerves in the lower spine
L5/S1	segments of the spinal cord
Laxity of anal tone	decrease of tone in the muscles of the anus (the outlet of the large intestine)
Microdiscectomy	a surgical procedure on the spinal cord
Perineal region	area between the vaginal opening and rectum
Pinprick	a test on the skin to detect pain sensation performed with a pin or needle
Plantar flexion	an extension or flexion of the foot at the ankle

Annex 3

List of legislation and policies considered

Society Of British Neurological Surgeons guidelines on 'Standards of Care for Established and Suspected Cauda Equina Syndrome 2009