Scottish Parliament Region: Lothian

Case 200802225: Lothian NHS Board

Summary of Investigation

Category

Health: Hospital; clinical treatment

Overview

The complainant (Mr C) had carpal tunnel release surgery performed on his left hand in June 2006. Unfortunately, post-operatively, he suffered pain, numbness and swelling in his hand. Mr C raised concerns about the way the operation was performed and also that he was not referred back to the operating surgeon to be re-examined as soon as possible after he complained of adverse symptoms. He has subsequently been told that he has permanent nerve damage.

Specific complaint and conclusion

The complaint which has been investigated is that Lothian NHS Board (the Board) did not provide reasonable care and treatment to Mr C during and following his operation for carpal tunnel syndrome *(upheld)*.

Redress and recommendations

The Ombudsman recommends that the Board:

(i) reinforce with staff the importance of referring patients back for a consultant review as soon as possible if there are complications or adverse symptoms which need attention; and

(ii) apologise to Mr C for the failings identified in this report.

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

Main Investigation Report

Introduction

1. The complainant (Mr C) raised a number of concerns with the Ombudsman regarding carpal tunnel release surgery performed on his left hand in June 2006 at St John's Hospital (the Hospital). Post-operatively, he suffered pain, numbness and swelling in his hand. He has been told that he has permanent nerve damage in his hand. Mr C raised concerns about the way the operation was performed and also that he was not referred back to the operating surgeon to be re-examined as soon as possible after he complained of adverse symptoms. Mr C complained to Lothian NHS Board (the Board) but remained dissatisfied with their responses and raised his complaint with the Ombudsman.

2. The complaint from Mr C which I have investigated is that the Board did not provide reasonable care and treatment to Mr C during and following his operation for carpal tunnel syndrome.

3. When Mr C initially raised his complaint with the Board and the Ombudsman, he also complained about other aspects of the carpal tunnel surgery and the way the Board had handled his complaint. The Ombudsman's office decided, for the reasons which have been explained to Mr C, that there were not grounds to pursue these complaints further. This report covers the outstanding areas of concern (see paragraph 1).

Investigation

4. In investigating this complaint, I have considered correspondence supplied by Mr C and the Board and Mr C's clinical records for the relevant period. I have also obtained the opinion of one of the Ombudsman's medical advisers, who is a Consultant Orthopaedic Surgeon (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. Mr C and the Board were given an opportunity to comment on a draft of this report. Abbreviations are set out in Annex 1. A glossary of terms and diagram are set out at Annex 2.

Complaint: The Board did not provide reasonable care and treatment to Mr C during and following his operation for carpal tunnel syndrome

Clinical background

6. Carpal tunnel syndrome is a medical condition in which the median nerve is compressed at the wrist, leading to paresthesias, numbness and muscle weakness in the hand. The definitive treatment for carpal tunnel syndrome is carpal tunnel release surgery.

7. The Adviser reviewed the clinical records and said that, in 1998, Mr C was diagnosed with right carpal tunnel syndrome and had surgery in July 1998. In 2006, he developed similar symptoms in his left hand and carpal tunnel release surgery was performed on 14 June 2006 by an acting consultant plastic and reconstructive surgeon (Consultant 1). Mr C recalls that he felt acute pain during the operation, however, this is not recorded on the operation notes. Post-operatively, Mr C had intense pain and his hand remained swollen with severe aching and shooting pains, especially in the index, middle and ring fingers. It is noted in Mr C's clinical records that he reported his concerns to staff when he attended the plastics dressing clinic at the Hospital to have his dressing changed on 16 June 2006 and again on 27 June 2006 to have his stitches removed.

8. Mr C was referred to physiotherapy on 27 June 2006 because of the adverse post-operative symptoms and his first appointment was on 3 July 2006. On 1 August 2006, he attended the Hospital again and was seen by a specialist registrar in plastic surgery. He was advised to continue with the physiotherapy and return in six weeks. From the clinical notes, it is evident that Mr C was seen by the specialist registrar again at the Hospital on 19 September 2006 and by a consultant plastic and hand surgeon (Consultant 2) on 14 November 2006. Following the appointment of 14 November 2006, Consultant 2 wrote to Mr C's GP and indicated she was concerned that there was an incomplete release or an iatrogenic injury to the median nerve (see Annex 2) and that nerve conduction tests were to be carried out. Nerve conduction tests (carried out in December 2006) confirmed that there was absent conduction in the left median nerve beyond the wrist. Mr C was seen by Consultant 2 on 23 January 2007. Following that appointment, Consultant 2 wrote to Mr C's GP and explained that Mr C may have Complex Regional Pain Syndrome (CRPS) and a Magnetic Resonance Imaging (MRI) scan was to be arranged. The ultrasound scan (which was performed rather than an MRI scan) on 8 March 2007 showed a significant narrowing of a segment of the nerve. Mr C was seen by

Consultant 2 again on 29 May 2007. Consultant 2 wrote to Mr C's GP and explained that she did not feel that any more recovery was likely and that further surgery would not be of significant benefit.

9. Following sight of Consultant 2's letter to his GP, Mr C raised various concerns about its contents with his GP. His GP contacted Consultant 2, who arranged for Mr C to have a second opinion on his continuing symptoms. This took place on 18 December 2007 with a consultant hand and upper limb surgeon (Consultant 3) from a neighbouring Health Board. Consultant 3 felt that there were two possible explanations for the adverse symptoms. Firstly, that there was acute compression from haematoma formation at the time of surgery and, secondly, iatrogenic injury. Consultant 3 indicated that it was impossible to know which of these happened but confirmed Consultant 2's view regarding re-exploration and reconstruction.

Mr C's complaint and the Board's responses

10. Mr C raised a complaint with the Board on 4 January 2008. He felt that something must have gone wrong during the carpal tunnel release operation and that this was not recognised or treated immediately afterwards. He also wrote again on 17 February 2008 when he was not happy with the Board's initial response.

11. The Board's first response to Mr C of 7 February 2008 explained that, despite a thorough review of Mr C's medical records, it was not possible to identify why the surgery on his left hand was not as successful as the surgery on his right hand and commented that the records did not indicate any complications during the surgery. Consultant 2 advised that she believed that Mr C may have suffered an iatrogenic injury at the time of the operation or an early post-operative complication. Consultant 3 considered that Mr C's symptoms may have been caused by an iatrogenic injury or acute compression from haematoma formation at the time or surgery. The Board apologised that the service had not met Mr C's expectations.

12. The Board's further response dated 25 March 2008 explained that the early post-operative complication mentioned in the response of 7 February 2008 referred to CRPS or a haematoma. CRPS is a potential complication of any hand operation, where the hand becomes swollen, stiff and painful, and Mr C had some of these symptoms when he was reviewed post-operatively. The Board explained that the referral to physiotherapy was an appropriate treatment

plan and, when the symptoms did not improve, Mr C was referred for an ultrasound scan and nerve conduction studies. Although there was no haematoma on the scan, this could have been because the scan was undertaken some time after the operation and any haematoma might have been reabsorbed by then. The Board's response indicated that the problems that Mr C experienced are a rare but recognised complication of this type of hand surgery. The Board expressed regret that the surgery had been unsuccessful and that Mr C had experienced complications.

13. On 6 April 2008, Mr C wrote again to the Board as he remained unhappy with their response. The Board then contacted Consultant 1, who had carried out Mr C's operation (who had left the Board area by that time), for his response. Consultant 1 explained (in his response of 2 September 2008) that he had not been made aware of Mr C's less than satisfactory post-operative recovery and, unfortunately, his advice was not sought at any time after the surgery. He explained that there was no nerve injury sustained during surgery because he would have been aware of this and would have documented it. Consultant 1 explained that, although it was difficult to determine why Mr C had had poor results from the surgery, it was his opinion that Mr C had developed a post-operative haematoma (a recognised complication of carpal tunnel release) and, because of the pressure from this, it caused damage to the nerve in the carpal tunnel. Consultant 1 said that he was sorry that Mr C developed this complication. It was difficult for him to assess whether Mr C had also had CRPS because he was not involved in his follow-up.

14. Mr C remained unhappy with the Board's responses to his complaint and, on 21 November 2008, he raised his complaint with the Ombudsman. He complained, amongst other matters, that there must have been nerve damage during surgery and that he should have been referred back to the operating surgeon following the presentation of adverse symptoms post-operatively.

The Adviser's opinion

15. The Adviser explained that the surgical procedure of a carpal tunnel release is considered a straightforward procedure with little risk. However, some patients deteriorate after carpal tunnel release and this is usually for one of the following reasons:

- if the degree of compression prior to surgery has already caused permanent damage to the median nerve. In these cases, the median

nerve sensation will not improve after surgery and the patient may be left with complete sensory and motor loss;

- if there is inadequate surgical release of the carpal tunnel ligament (see Annex 2). This leaves a very narrow tight band intact and the pressure on the median nerve, from this band, is such that it causes severe damage to the nerve. This can lead to permanent loss of function of the nerve;
- if there is a sharp injury to the median nerve from the surgical blade. However, it is unlikely that the nerve would be divided by the blade because the nerve release is done in line with the nerve rather than across the nerve;
- if there is damage to the motor branch of the median nerve.

16. The Adviser said that the function of Mr C's left median nerve prior to the surgical carpal tunnel release was clearly better than it was following the surgery. The ultrasound report of a narrowed area of the median nerve (see paragraph 8) suggested that a very tight band had been left behind which had compressed the median nerve so severely that it could not function. The intra-operative pain Mr C felt (see paragraph 7) could have been the direct pressure on the nerve when Consultant 1 was trying to release this last part of the carpal tunnel ligament. Therefore, the Adviser has indicated that it is his opinion that the operation was performed inadequately.

17. In response to the Adviser's comments, the Board explained that the ultrasound scan, which gives a clear account of the median nerve, gives no indication of causation. However, the Adviser has said that the ultrasound scan description of the median nerve is what would be expected if the nerve was divided transversely (cut into) during surgery or if a residual part of the carpal tunnel ligament had been left intact at the time of surgery, causing severe compression of the nerve. In the period of time from when the surgery was performed to the date of the scan (about nine months), the median nerve would attempt to regenerate across the gap and, therefore, both possibilities are viable when viewed on an ultrasound at this late stage.

18. The Adviser has said that it would not be possible at this stage to confirm which of the two possibilities was the actual cause of Mr C's post-operative loss of function. If the nerve is divided surgically, there is no post-operative pain but pure loss of function of that nerve. However, if the nerve is left compressed by a narrow band, the patient would experience more severe pain than prior to the surgery. In the Adviser's experience, the failure to completely release the

carpal tunnel ligament, leaving behind a narrow band of the carpal tunnel ligament, is a more common cause of post-operative median problems than direct nerve division. The Adviser has suggested that haematoma (see paragraphs 12 and 13) was unlikely to have caused the degree of nerve compression experienced by Mr C.

19. Post-operatively, the Adviser has indicated that any patient with increased symptoms, such as Mr C described, should be immediately reassessed by the operating surgeon (or another consultant) and perhaps returned to theatre for an exploration of the causes of the increased symptoms. This should be done as soon as a problem is recognised. It does not appear that Mr C was seen again by Consultant 1 and it is my understanding from the evidence provided by Mr C and the clinical notes that the first time he was seen by a consultant post-operatively was on 14 November 2006, five months after the operation. The Adviser has said that this would have been beyond the scope of a repair of the nerve if it had been surgically divided or, if part of the carpal ligament had been left intact, release of the residual ligament would probably not have been beneficial either.

20. In Mr C's case, there does not appear to have been any reassessment of Mr C by the operating surgeon (or another consultant) following the presentation of adverse symptoms. The Adviser has indicated that this is unacceptable and poor surgical practice. Although early surgery may not have solved Mr C's problems, there would have been the potential to improve.

Conclusion

21. Mr C raised concerns about the way the operation was performed, as he felt something must have gone wrong during the carpal tunnel release operation and this caused the subsequent adverse symptoms. It is the Board's opinion that it is impossible to say exactly what caused Mr C's adverse symptoms and the ultrasound scan gives no indication of causation. The Board have indicated that the problems Mr C experienced post-operatively could have been due to one of a number of recognised complications of carpal tunnel release surgery.

22. The Adviser has explained that there are various reasons why Mr C had adverse symptoms following this type of surgery. However, the ultrasound scan description of the median nerve is what would be expected if the nerve was divided transversely during surgery or if a residual part of the carpal tunnel ligament had been left intact at the time of surgery causing severe compression

of the nerve (although it is not possible to confirm which of these two possibilities actually caused Mr C's adverse symptoms). Having carefully considered all the evidence, including the Adviser's opinion and his interpretation of Mr C's ultrasound scan, on balance, I consider that the operation was carried out inadequately.

23. Mr C raised concerns that the adverse symptoms he experienced post-operatively were not recognised or treated when he attended the Hospital after the operation. Mr C explained his concerns when he attended the Hospital on 16 June 2006, 27 June 2006 and 1 August 2006; however, it is my understanding from evidence provided by Mr C and the clinical records that the first time Mr C was seen by a consultant was on 14 November 2006. The Adviser has indicated that any patient who has increased symptoms, such as Mr C described, should be reassessed by the operating surgeon (or another consultant) immediately when the adverse symptoms were recognised and this does not appear to have happened in Mr C's case.

24. Therefore, I uphold this complaint.

Recommendations

25. The Ombudsman recommends that the Board:

(i) reinforce with staff the importance of referring patients back for a consultant review as soon as possible if there are complications or adverse symptoms which need attention; and

(ii) apologise to Mr C for the failings identified in this report.

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

Annex 1

Explanation of abbreviations used

Mr C	The complainant
The Hospital	St John's Hospital
The Board	Lothian NHS Board
The Adviser	One of the Ombudsman's medical advisers
Consultant 1	Acting consultant plastic and reconstructive surgeon who undertook Mr C's operation on 14 June 2006
Consultant 2	Consultant plastic and hand surgeon who first saw Mr C on 14 November 2006
CRPS	Complex Regional Pain Syndrome
MRI	Magnetic Resonance Imaging
Consultant 3	Consultant hand and upper limb surgeon, from a neighbouring Health Board, who provided the second opinion on 18 December 2007

Annex 2

Glossary of terms and diagram

Carpal Tunnel Syndrome	A medical condition in which the median nerve is compressed at the wrist, leading to paresthesias, numbness and muscle weakness in the hand
Complex Regional Pain Syndrome	A rare condition which causes chronic burning pain in one of the limbs, usually in one of the arms, legs, hands, or feet. It is usually triggered by a previous injury, or trauma (damage to the body's tissue)
Haematoma	A collection of blood outside the blood vessels
Iatrogenic	Caused by the activity of physicians
Paresthesias	The sensation of prickling and tingling