MEDICAL REPORT

Liability and causation

On

Mr G

Mr Lindsay Muir   M.B., M.Ch.Orth., F.R.C.S. Orth (Glasg)
Consultant hand surgeon

Salford Royal Hospital,
Stott Lane,
Salford,
M6 8HD.

Patient:	Mr G
Address:	
Date of birth:	
Occupation:	(1) Childcare assistant and (2) trainee teacher
Hand dominance:	Right-handed
Report requested by:	Messrs , Solicitors.
Solicitor's reference:	
My reference:	
Date of report:	12 September 2019

1. INTRODUCTION

1.1. This report has been prepared at the request of Messrs, Solicitors. In their letter of instruction they note that they represent Mr G in a proposed claim for medical negligence against NHS Foundation Trust arising out of a delayed diagnosis and treatment for a fractured scaphoid.

1.2. In preparing this report I understand my duty is to the Court and I have done my best to discharge this duty conscientiously.

1.3. I emphasise that I have not taken a history from and nor have I examined the Claimant, Mr G, for the preparation of this report. It has been prepared solely from the records.

2. DOCUMENTS EXAMINED

2.1. Letter of instruction

2.1.1. The letter of instruction summarises that Mr G had sustained an injury of his wrist in a rugby accident on 27 March 2018. He attended the A&E department at Hospital and was sent for X-rays. No fracture was demonstrated and he was advised that he had a sprain.

2.1.2. Mr G returned to the hospital on 3 April 2018 with continuing pain and was again advised that he was likely to have a sprain. He was given a splint to wear.

2.1.3. On a third occasion, on 29 March 2018, he was again advised that he had a tendon injury.

2.1.4. Finally on 17 August 2018 a fracture of the scaphoid was diagnosed and, on 24 September 2018, he underwent internal fixation and grafting of the scaphoid.

2.2. Hospital records

2.2.1. Records of Hospitals. Case Sheet No..

2.3. GP records

2.3.1. Records of the Surgery.

3. REVIEW OF HOSPITAL RECORDS

3.1. Left scaphoid (2009)

18.08.09 X-ray report on left scaphoid. There is a fairly convincing fracture line through the waist of the scaphoid on the AP view. [Page 12.1]

25.08.09 Note of a left scaphoid fracture. [6.24]

02.11.09 CT, left wrist. There are small areas of bony bridging across the scaphoid suggestive of partial union. Overall this is approximately 20% of the overall surface area. [12.3]

24.11.09 Listed for screw fixation of left scaphoid.

21.04.10 Operation note for left scaphoid fixation and grafting. [6.30]

20.07.10 X-rays of left scaphoid show encouraging progress. [6.41]

3.2. Right scaphoid (2018)

27.03.18 A&E card.

The nurse writes: Patient playing rugby this p.m. Hyperextended arm. Complains of radiating pain to right wrist. [6.84]

The doctor writes: Patient bent back right wrist at rugby. On examination, tender ulnar side of wrist. Elbow: Full range of movement, non-tender. Anatomical snuffbox/scaphoid non-tender. X-ray, right wrist, normal. Diagnosis: Sprain. Discharged with advice. [6.87]

27.03.18 X-ray report on X-ray, right wrist. No acute bony injury seen. Bony alignment through the carpus appears satisfactory. [12.7]

03.04.18 A&E card.

Triage details: Right hand injury, playing rugby 1 week ago. Hyperextended hand. Seen in A&E 1 week ago. No obvious fracture seen but advised to return if pain continues. Pain still present. [6.88]

The A&E surgeon notes: 24-year-old student. Hyperextension injury 1 week ago, playing rugby. Not improving. On examination: Bruising over palmar distal radioulnar joint. Pain on pronation, supination, flexion. No bony tenderness. No scaphoid

tenderness. X-ray (previous): No fracture seen. Diagnosis: TFCC sprain. Plan: Splint for 10 days. Advice: Rest, etc. Return if no improvement in 2 weeks. [6.91]

29.05.18 A&E card.

The triage nurse writes: Injured wrist 6 weeks ago. Has been seen here intermittently as pain is not going away. Pain continues in scaphoid. [6.92]

The doctor writes: Right wrist pain for 8 weeks. Hyperextension injury to right wrist in late March 2018 whilst playing rugby. Attended emergency department, had X-ray which was normal, discharged with wrist splint, advised to rest and return if no improvement. Returns today, complaining of pain in right wrist, worse when gripping and heavy lifting. On examination, mild swelling over palmar distal radioulnar ligament. Pain on flexion. No bony tenderness. No scaphoid tenderness. No scaphoid tenderness or pain on application of longitudinal thumb compression. Plan: Home with advice to rest wrist, to return if no improvement in 4 weeks. [6.95]

17.08.18 A&E card.

Presenting complaint: Pain right wrist. [6.98]

The doctor writes: Injury to right hand. 24-year-old man, right-

handed. Patient injured his wrist in March 2018 playing rugby. He was X-rayed, and reported that there was no fracture. However, patient still experiencing pain. He was advised that it was a ligament injury and to return if no improvement in 4 weeks. Indeed he returned and was told it was tendon damage, told to rest for 3 months and return if pain no better. Patient experiencing pain and occasional loss of power (dropping things) … and complains of aching of wrist radiating into carpal bones and reduced range of movement. Lives with partner. No children. Works at a children's nursery. Studying primary education at university. Occasional alcohol. Non-smoker. On examination, no obvious swelling. Wrist was painful and tender and had marked restriction of range of movement. X-ray shows fractured scaphoid. Plan: Scaphoid cast or splint and fracture clinic follow-up. [6.101-6.102]

20.08.18 Seen by Mr H. Diagnosis: Non-union, proximal pole fracture, scaphoid, right wrist. Treatment: CT and review. The history is outlined. Urgent CT requested. [3.83]

22.08.18 Seen by Mr M, Consultant Orthopaedic Surgeon. He outlines the history. He notes the past history of fracture of the left scaphoid. Examination revealed tenderness over the scaphoid tuberosity, full wrist flexion, wrist extension slightly limited by pain. X-rays and CT show a fracture of the proximal pole and cystic change. Recommends surgery arthroscopically. [1.45]

Of note, I do not have the operation note for the operation of 27 September 2018.

19.12.18 CT scan report shows the scaphoid fracture looks solidly united. [12.11]

4. REVIEW OF RADIOGRAPHS

4.1. A number of radiographs have been sent on CD. I shall comment only on those relating to the right scaphoid. Of note is, however, that I agree that the plain films of 18 August 2009 do show a fracture of the waist of the left scaphoid which, by the time of the films of 20 July 2010, does seem at the very least to be attempting to heal.

27.03.18 Right wrist PA and lateral views.

Even with the benefit of hindsight, no scaphoid fracture is visible here.

17.08.18 Right wrist PA and lateral views.

There is a fracture of the waist of the scaphoid, more towards the proximal than the distal pole.

21.08.18 CT, right wrist.

The fracture is demonstrated with a clear non-union and some cystic change.

27.09.18 Intraoperative films showing the position at the time of screw fixation.

The placement of the screw appears excellent on all views. Probably on the PA view, it is outside the bone but inside the cartilage.

07.11.18 Right scaphoid.

The fracture appears to be healing. There is a defect at the site of the bone graft harvest.

19.12.18 CT of wrist.

The fracture of the scaphoid has been fixed as indicated by a screw. There is probable partial union, albeit that the fracture line is still visible.

5. REVIEW OF GP RECORDS

5.1. Handwritten notes

5.1.1. There are no handwritten notes.

5.2. Computerised records

5.2.1. These were printed on 5 October 2018. There are notes noting receipt of correspondence but there are no other relevant entries.

5.3. Correspondence and reports

5.3.1. There are copies of the hospital records. There are no other relevant entries.

6. OPINION

6.1. Timeline

27 March 2018	Mr G, a 24-year-old right-handed man, injures his right wrist playing rugby.
27 March 2018	Attends Hospital. Diagnosed as having a sprain. Given advice and to return in 1 week if not improving.
3 April 2018	Reattends, complaining of pain. Given splint for 10 days. Advised to return if no improvement in 2 weeks.
29 May 2018	Reattends A&E. Diagnosed as TFCC sprain. To be seen again in 4 weeks if no improvement.
17 August 2018	Reattends. X-ray shows fractured scaphoid. Given a Futuro splint and referred to fracture clinic.
20 August 2018	Seen in fracture clinic by Mr H. Referred for a CT scan.
21 August 2018	CT scan.
22 August 2018	Seen by Mr Mason and listed for surgery.
27 September 2018	Operation. Grafting and screw fixation of scaphoid. (I do not have the operation note for this.)
19 December 2018	CT scan reported as showing union of the fracture. My opinion is that union is not complete.

2.1. Preamble

2.1.1. I would ask the Court to view my opinion where appropriate as being based on the balance of probabilities test throughout, to avoid cumbersome repetition of the phrase.

2.2. Management in the A&E department

2.2.1. Management in the A&E department is a matter for an expert in accident and emergency medicine. I anticipate that a report will be sought from such an expert who will be able to advise the Court.

2.3. Scaphoid fractures

2.3.1. The scaphoid is one of the eight bones of the carpus. The bones link the hand and the forearm.

2.3.2. Fractures of the scaphoid can be difficult to identify at first x-ray and it is not infrequent for these to be diagnosed at a later attendance.

2.3.3. There is evidence that a delay in diagnosis of up to four weeks does not significantly reduce the rate of union.

2.3.4. In the case of Mr G, his fracture was not diagnosed until 20 weeks later.

2.3.5. The literature on undisplaced scaphoid waist fractures suggests that most will heal in a plaster cast or with percutaneous early fixation.

2.3.6. Whether one of these is superior to the other is the subject of some debate in the hand surgical literature and indeed the subject of a currently ongoing multi centre randomised prospective trial.

2.3.7. Singh & Dias (Displaced fracture of the waist of the scaphoid. Journal of Bone & Joint Surg. 2011; 93-B: 1433-9) note that between 85 and 90% of patients with an undisplaced scaphoid waist fracture treated conservatively in a plaster cast will see their fracture heal.

2.3.8. Therefore, had Mr G's fracture been identified initially, treatment would have continued along the lines outlined above, namely either plaster cast immobilisation or percutaneous fixation.

2.3.9. The fracture would have healed with either percutaneous fixation or with plaster cast treatment. The union would probably have occurred over a period of somewhere between 6 and 12 weeks.

2.3.10. I estimate that he would have been in plaster for somewhere between six and twelve weeks with plaster cast immobilisation. My own personal preference following percutaneous fixation is

to adopt a belt and braces position and therefore to offer fixation plus plaster cast for four to six weeks, followed by mobilisation from a removable cast for a further six weeks. I obtain check x-rays and check CT scans until I am confident that the fracture has united.

2.3.11. Had the fracture united first time then he would have been left free to mobilise. He may have required some physiotherapy.

2.3.12. The evidence offered by Singh and Dias is that there is an increased risk of degenerative arthritis in the wrist following healed scaphoid fracture, even if treated conservatively. The figures demonstrated in this paper seem instinctively too high to me, for if this were true we would see quite a number of patients with osteoarthritis secondary to an old scaphoid fracture and this is not the case. None the less, there is a risk of degenerative arthritis, even with successful treatment.

2.3.13. The Singh and Dias paper suggests that the osteoarthritic degeneration rate is similar with open reduction internal fixation and non operative treatment (see table II). The rate quoted varies somewhat but I think that a rate of 5% of degenerative change following united scaphoid fracture is reasonable. This risk has not been increased by the delay in treatment.

2.3.14. Had Mr G undergone percutaneous fixation I anticipate that he would have a short incision, perhaps up to 4 cm, over the dorsal surface of the wrist.

2.3.15. On the balance of probabilities, assuming that the fracture had united, Mr G may now be left with some minor discomfort. The literature suggests between 7 and 10%. This risk has not been increased by the delay in diagnosis.

2.3.16. I should note that these above mentioned figures do leave open the possibility of the fracture not uniting primarily.

2.3.17. This risk is small, but if the fracture had not united (and I estimate that the risk of this was perhaps of the order of 10%-15%) then he would have required the same treatment as he has now received and indeed the long term outcome would have been the same.

2.4. Comment in respect of specific dates

2.5. Management on 27 March 2018

2.5.1. Had the fracture been diagnosed at this stage, a plaster cast would have been applied and probably, with so little displacement, conservative management would have been pursued.

2.5.2. One must accept that the fracture was not visible at least on the 2 views.

2.5.3. Mr G was advised to return within a week. Had his fracture been diagnosed at 1 week, no harm would have come and the probability of union would have been unchanged.

2.6. Management on 4 April 2018

2.6.1. A very similar analysis applies. Had Mr G returned 2 weeks later as advised and had he undergone an X-ray, the fracture would by this stage have been visible on X-ray and would have been diagnosed.

2.6.2. It will be for the Court to determine whether an X-ray would or would not have been taken at this second consultation.

2.6.3. The arithmetic for this is that, on 4 April 2018, he was 8 days post-injury and by 2 weeks thereafter would have still been within 4 weeks.

2.6.4. The evidence is that delay in immobilisation of a scaphoid fracture up to 4 weeks probably does not affect the rate of union.

2.7. Management on 29 May 2018

2.7.1. By this stage the scaphoid non-union was probably well under way to establishment. Conceivably if the fracture had been

diagnosed at this stage he would have got away without distal radial bone grafting and with simple percutaneous or mini-open screw fixation. On balance I would estimate that he would have required surgery of some sort but, on balance, probably I would have not bone grafted him. Without an X-ray from this date, however, it is impossible to tell and this is really speculation.

2.8. Management on 17 August 2018

2.8.1. The management here has been very satisfactory. A rapid referral has been made to the fracture clinic. He has been seen rapidly in the fracture clinic and a CT scan arranged.

2.8.2. The arrangement of the CT scan was correct and entirely appropriate and indeed was performed very rapidly.

2.8.3. Mr G was seen by Mr Mason on 22 August 2018 and, on 27 September 2018, he underwent fixation.

2.8.4. Fortunately this seems to have been successful to date, although union is not yet complete and it will be essential to confirm this.

2.8.5. If the fracture has not healed different considerations will apply.

2.8.6. For the avoidance of doubt, the delay between 22 August 2018 and 27 September 2018 has made no difference to the long-term outcome.

2.9. Prognosis

2.9.1. I have not seen Mr G to determine his present condition.

2.9.2. The prognosis is, however, as indicated in the literature review above.

2.10. Further comments

2.10.1. I understand my duty is to outline for the Court any potential variation in medical opinion.

2.10.2. I do not think that there would be any disagreement over the above.

I understand my duty is to the Court and have complied and will continue to comply with that duty. I am aware of the requirements of Part 35, this practice direction and the Protocol for the Instruction of Experts to give Evidence in Civil Claims.

I confirm that I have made clear which facts and matters referred to in this report are within my own knowledge and which are not. Those that are within my own knowledge I confirm to be true. The opinions I have expressed represent my true and complete professional opinions on the matters to which they refer.

I understand that proceedings for contempt of court may be brought against anyone who makes, or causes to be made, a false statement in a document verified by a statement of truth without an honest belief in its truth.

Mr Lindsay Muir,
Consultant hand surgeon,
Honorary senior lecturer in orthopaedic surgery at the University of Manchester