

Scottish Parliament Region: Highlands and Islands

Case 200802564: A Dentist, Western Isles NHS Board

Summary of Investigation

Category

Health: Family Health Services, Dental and Orthodontic Services

Overview

The complainant (Ms C) raised a number of concerns about the dental treatment she received from her dentist (the Dentist) in October and November 2008, which led to her attending her local hospital in great pain and with a swollen face.

Specific complaint and conclusion

The complaint which has been investigated is that, in October and November 2008, the Dentist provided Ms C with an inadequate level of treatment (*upheld*).

Redress and recommendations

The Ombudsman recommends that the Dentist:

- (i) apologises to Ms C for the failings identified in this report;
- (ii) reflects on the adviser's comments in regard to her technique in root canal treatment, in particular, in relation to working length calculation and the use of a rubber dam; and
- (iii) reflects on the adviser's comments with regard to record-keeping.

The Dentist has accepted the recommendations and will act on them accordingly.

Main Investigation Report

Introduction

1. In January 2009 the Ombudsman received a complaint from Ms C about the dental treatment she received from her dentist (the Dentist) in October and November 2008, which led to her attending her local hospital in great pain and with a swollen face. Ms C complained to the Dentist but remained dissatisfied with her response and subsequently complained to the Ombudsman.

2. The complaint from Ms C which I have investigated is that, in October and November 2008, the Dentist provided Ms C with an inadequate level of treatment.

Investigation

3. In writing this report my investigator has had access to Ms C's dental records from the dental practice (the Practice) and the correspondence relating to her complaint. My investigator made enquiries of the Dentist and I obtained advice from two of the Ombudsman's professional dental advisers (Adviser 1 and Adviser 2) regarding the clinical aspects of the complaint.

4. I have not included in this report every detail investigated but I am satisfied that no matter of significance has been overlooked. An explanation of the abbreviations used in this report is contained in Annex 1. A glossary of terms used in this report is contained in Annex 2. Ms C and the Dentist were given an opportunity to comment on a draft of this report.

Complaint: In October and November 2008, the Dentist provided Ms C with an inadequate level of treatment

5. In a letter dated 12 November 2008, Ms C complained about the treatment which she received from the Dentist. She followed this with a further letter dated 23 January 2009. She said that on 30 October 2008 she saw the Dentist as she was 'suffering from sensitivity' in an upper tooth on the left hand side of her face. She said that the Dentist took out an old filling and put in a temporary filling as the root was rotten. She then had no pain. She attended a follow-up appointment the following week. She said the Dentist told her she would give her a new filling and that she did not require an anaesthetic as the nerve in her tooth 'had already gone'. As the Dentist removed the old filling she started to feel pain. The Dentist told her that there 'must be some nerve still there' and

gave her a pain killing injection. The Dentist waited until this took effect and then started to remove the rest of the nerve.

6. Ms C continued that the Dentist then proceeded to use parcan (a pre-diluted solution for dental use) in the tooth. She started to feel excruciating pain and a horrendous burning feeling in her jaw and the inside of her cheek, which caused her to cry out in pain. The Dentist told her that she had an abscess at the top of the tooth and that some of the parcan had gone into the abscess causing a reaction. The Dentist told her that she would give her antibiotics and that she had to return to the surgery the following day so that she could complete the new filling.

7. Later that same day she had to attend the accident and emergency department of her local hospital because her face had become swollen, she had a burning sensation in her face and she was in pain. The following day she saw the Dentist who was unable to treat her because her face was still swollen.

8. Following the dental treatment, she was subsequently told by another dentist and a facial surgeon that she had permanent nerve damage to her face. She also now suffers from neuralgia. She has since transferred to another dental practice.

9. In response to Ms C's complaint, the Dentist replied that she saw Ms C on 30 October 2008. She quickly ascertained that Ms C's upper left first premolar tooth (UL4) was tender when tapped. Ms C described pain going up to her ear from the upper left molars. On examination, there was a tiny hole in the surface of UL4 but this was not in the area that Ms C said she had pain. A radiograph of the upper left quadrant, principally to check the molars, was taken, and it was explained to Ms C that the cavity in UL4 was more extensive than on visible examination and would need restoration. A follow-up appointment for the filling was made and UL4 was dressed with a temporary filling material.

10. The Dentist continued that when Ms C arrived the following week, 6 November 2008, she seemed quite happy that the pain had disappeared quickly after the last appointment. She said to Ms C that as she had removed the pulp (the soft inner structure of a tooth consisting of nerve and blood vessels) the previous week she could proceed without anaesthetic as she would be unlikely to feel anything. The temporary filling was removed and the buccal

canal (the root canal towards the cheek side of the tooth) opened again without pain.

11. However, as Ms C had a small amount of discomfort in the last few millimetres of the palatal canal (the root canal next to the jaw) she stopped. She told Ms C that there was a small portion of the nerve tissue left in the tooth and it would be best to have some anaesthetic in order to complete the treatment. There was no problem with the injection and she carried on filling the canals. An apex locator (an electric device which measures the length of the root canal accurately) was used together with a radiograph, which was available from earlier in the year, and a working length of 21 millimetres was established. This is the length that would be expected in an upper premolar tooth. The anatomy of the tooth had given every indication of being normal and there was no pain in the instrumentation of the canals being filed. Neither of the canals had any sign of pus or infection and were dry as she was working on Ms C.

12. Having completed this part of the root treatment she asked her dental nurse to pass her parcan. Firstly she used half to wash the palatal canal which was fine. Then she moved the needle to the buccal canal. After about 0.5 millilitre of the parcan had been delivered, Ms C said it was really painful and tried to grab her hand. She explained to Ms C that she would remove the needle right away and asked her to keep still until she had done this. After its removal, Ms C sat up, said that she was in pain and that it felt like acid had been used on her mouth.

13. The Dentist said that she knew immediately that this meant the parcan had filtered beyond the apex (the tip of the root) and the tooth needed to be irrigated with lots of water. It was a while before she managed to do this as Ms C was clearly in some discomfort and crying. When Ms C was ready to proceed she flushed the tooth out several times with water to drain. This continued for some time and more solution appeared in the internal cavity of the tooth meaning some of the fluid was still draining. Only the buccal canal was affected.

14. She discussed with Ms C whether to continue treatment. She suggested to Ms C that as she felt pain and was upset she may have preferred her to dress the tooth and for Ms C to come back to complete root treatment at a later date. Ms C said that she wanted to try and finish the treatment. However, on

going back to the tooth, as Ms C still felt pain, she told her that she considered that it would not be wise to seal the tooth that day as it was still draining.

15. Ms C was given a prescription of antibiotics to prevent any infection developing. She told Ms C that she would also need pain killers for the inflammation. Ms C said she had plenty of medication as she was taking them for her neck. She told Ms C that in order to prevent contamination of the open tooth with other bacteria it would be best to seal the tooth the following day. Ms C agreed to return to the dental surgery the following morning.

16. The following morning she saw Ms C who said she was very unhappy and still in pain. Her face was swollen but not more than expected and the outside of her cheek was red over the left cheekbone but this had not spread to her neck, ear or eye. Ms C had no rash or red blotches elsewhere and had no difficulty talking or breathing in the surgery. Ms C told her about the visit to the hospital and that she had got no pain relief from the doctor or the on call dentist. She told Ms C there were stronger painkillers she could prescribe. However, as Ms C explained she could not take any due to stomach problems she told her that it would, therefore, be necessary to discuss suitable pain relief with her general practitioner. She also warned Ms C that if the swelling got much worse she may need to go to hospital for intravenous antibiotics but this would be unusual.

17. Ms C asked if there was any possibility the wrong solution had been used. She told Ms C there was not as she had seen the parcan prepared from the bottle in advance of the treatment by the assisting staff, though she acknowledged that such mistakes can happen and do happen but this was not the case here. She told Ms C that she had recorded her reaction in her clinical notes.

18. The Dentist then discussed finishing the treatment with Ms C who said she did not want to see her again as in her words 'she had no faith in me'. She told Ms C that she would speak to one of her colleagues to arrange for the root treatment to be finished. Ms C left with a prescription for more antibiotics. She said she would call Ms C's doctor and also explain the situation to the on call dentist.

19. The Dentist said that in her view this type of response to fluid beyond the apex of the tooth is extremely rare. It has never happened to her when doing a root treatment before in 18 years of practice.

20. Adviser 1 explained the purpose of root canal treatment was to remove the nerve or nerves from the tooth, clean/irrigate the space left and then fill the root canal(s). The affected tooth requires to be isolated and a rubber dam placed around it so that it can be worked on without the risk of instruments being dropped into the mouth or saliva and bacteria contaminating the area. In root canal treatment, irrigating solutions are used to clean out the root and the rubber dam prevented such solutions escaping into the oral cavity.

21. Adviser 1 continued that, at the commencement of root canal treatment, the dentist drills into the tooth to access the root canals, as was the case with Ms C. Once the root canals have been located, the working length of the root canal or canals needs to be determined. Exact determination of working length is one of the basic principles of successful root canal treatment. It enables the dentist to prepare the root canals as close as possible to the tip of each root, known as the apex or apices. Without the working length measurements, a dentist cannot know where they are in the root canal system in relation to the apex of the tooth. The working length must be recorded in the patient's clinical notes.

22. Adviser 1 said there were two methods for determining the working length. The first was electronically by using an apex locator. The second method is by radiography which shows how far a root canal file has been inserted in the root canal and if it has been placed in a correct position in relation to the apex of the root.

23. Adviser 1 has told me that upper first premolar teeth often have two root canals. The Dentist, in a letter to Ms C dated 10 December, stated that there were two root canals at UL4. Adviser 1's view is that with two root canals it would have been clinically appropriate that the Dentist should have taken a diagnostic pre-operative radiograph to measure the working length.

24. My investigator has confirmed that no such radiograph was taken prior to the start of the root canal treatment. The Dentist stated in her letter to Ms C that an apex locator was used, this is not recorded in Ms C's clinical notes. There is no record of the working length in the notes.

25. Adviser 1 said that, as part of root canal treatment, a dentist has to irrigate the root canal. He told me that, in Ms C's case, it is 'quite clear' that the irrigant extruded beyond the apices of UL4 into the surrounding tissue. There are severe consequences that can occur in this situation. Adviser 1 does not agree, therefore, that the type of response experienced by Ms C would be rare and nerve damage often or usually results as a result of this type of incident.

26. Adviser 2, a professor in oral surgery, told me that they agreed with Adviser 1. Adviser 2 states that she has no doubt that Ms C suffered from excruciating pain during and after her treatment by the Dentist and that tissue damage will have occurred due to the extrusion of parcan into the UL4 area.

27. My investigator asked the Dentist to respond to the Advisers' comments. The Dentist said that she does use a rubber dam but did not do so in this case. In her opinion, the rubber dam would have made no difference to the extrusion of fluid beyond the apex of the tooth. She said she usually recorded the working length of the roots in the notes after placement of the master point in the root canal. It is her normal practice to use an apex locator but she cannot be categorical that she used one in this case.

28. The Dentist said that she had a radiograph from some seven months prior to the treatment in question. Unfortunately this radiograph had now been lost. When Ms C returned for treatment in October 2008 she had symptoms of irreversible pulpitis. Accordingly, it did not seem to be in Ms C's best interests to obtain a further radiograph before commencing root canal treatment. She does not recall the radiograph revealing anything unusual about the form and structure of the root of the tooth. The pulp had been removed on the visit on 30 October 2008 to a length of 21 millimetres and this had resulted in the tooth being pain free almost immediately so it seemed fair to assume that this was the correct length without further radiographic exposure except a final check radiograph. By the time she would have taken the radiograph the incident had happened and Ms C did not want any more treatment.

29. My investigator asked Adviser 1 about the Dentist's comments. He did not consider the explanations provided by the Dentist to be acceptable.

Conclusion

30. Ms C complained about the standard of dental treatment which she received from the Dentist. I have to base my decision on the available evidence and the advice I have received. The Dentist has confirmed that no rubber dam was used to prevent possible contamination and irrigating solutions escaping into the oral cavity. I have been advised that it is essential to establish the working length of the root canals and to record this. Without this, a dentist cannot know where they are in the root canal system in relation to the apex of a tooth. There is no evidence I can find that the working lengths were established, and they certainly were not recorded. Ms C suffered severe pain as a result of the treatment she received. I uphold the complaint.

Recommendations

31. I recommend that the Dentist:

- (i) apologises to Ms C for the failings identified in this report;
- (ii) reflects on Adviser 1's comments in regard to her technique in root canal treatment, in particular, in relation to working length calculation and the use of a rubber dam; and
- (iii) reflects on Adviser 1's comments with regard to record-keeping.

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

Explanation of abbreviations used

Ms C	The complainant
The Dentist	The dentist who treated Ms C
The Practice	The dental practice where the Dentist treated Ms C
Adviser 1	One of the Ombudsman's professional dental advisers
Adviser 2	An external professional dental adviser to the Ombudsman
UL4	Upper left first premolar tooth

Glossary of terms

An apex locator	An electric device which measures the length of the root canal accurately
Irreversible pulpitis	condition where the pulp, (the soft inner structure of a tooth consisting of nerve and blood vessels), is irreversibly damaged
Parcan	A pre-diluted solution for dental use
Radiograph	An x-ray
Root canal treatment	The treatment of painful or diseased teeth in which the nerves are removed and the root canal is filled with an inert root filling material
The buccal canal	The root canal towards the cheek side of the tooth
The palatal canal	The root canal next to the jaw