



WINSPERT



OSCE CASES

SILVER SET

SILVER SET: CLUSTER 1
(Clinical Information Gathering)
**PRESCHOOL KID WITH PAIN,
PROBABILITY OF MIH**



Ms Alice Zhang is a 5 year old, visiting your dental clinic for the first time today with her father. Her father reports that she has been experiencing pain in a tooth on her lower left side, which prevented her from sleeping last night.

On examining, you observe that the second primary molar on the left side has significant decay and swollen gums. Medically she is fit and well. Her father mentions that Alice took antibiotics for an ear infection when she was under 2 years old.

Address patient's concerns and gather information.

CASE:

Introductory paragraph/ opening empathetic statement:

Mr. Zhang, it must be quite a difficult and hard time with Alice not being able to sleep because of a toothache. Can you tell me more about her pain?
Did she eat something in the last 24 hours?

Mr. Zhang, I'm going to do my best to take her out of this painful situation.

Exploring chief complaint with parent:

(If any question you ask in the opening remarks, if mentioned in the scenario or while initial description by patient, do not ask them again).

Also, I understand Mr. Zhang you must have noticed a few things either by Alice or on your own. To relieve her, I have to understand the features of her pain and have a thorough look. So, I will make it quick with my questions to understand her situation.

Site

- "Where is the pain?"
- "Can she point to the tooth or area?"

Onset

- "When did the pain start?"
- "Did it come on suddenly or gradually?"
- "Did Alice mention it or you figured it out for her?"

Character

- "How would she describe the pain?" (e.g. achey, sore, throbbing, sharp)
- "Is the pain constant or does it come and go?"
- "Does pain aggravate on biting down?"

Radiation

- "Does the pain spread elsewhere?"

Associations

- "Did she complain of any other symptoms that seem associated with the pain?" (e.g. bad taste, fever, discharge)
- "Any swelling around the gums or on the face that you observed for her?"

Time Course

- "Did she mention if pain has changed over time for her?"

Exacerbating or relieving factors

- "Did you give her any medications for her pain? Or Does anything make the pain better?" (e.g. analgesics)
- "Does anything make it worse or trigger it?" (e.g. cold, touch, lying down, while biting).

Relevant history and explanation of risk factors:

1 Medical history

Mr. Zhang you mentioned antibiotics for Alice's ear infection. Any other medication she took in the past or going on now? Is she all well now? Any other medical updates or allergies, Mr. Zhang?

2 Dental habits

How often do you take her to the dentist? The reason I'm asking Mr. Zhang, we miss out on a few things which can only be appreciated by the dentist, and to prevent worse outcomes, it's advisable to visit the dentist every 6 months..

3 Oral habits

Does she brush her teeth on own? How many times is it? Does she use floss? I understand this might come as a shock but Mr. Zhang most of the decay and gum disease starts in between teeth. And thus, as soon as the teeth come in contact we advise using floss.

Also, what toothpaste does she use?

I will shortly come to my explanation for her pain, Mr. Zhang.

4 Social History

How are her food habits? And what about her water intake?

Explanation of MIH/ hypo plastic tooth and risk factors:

Thank you for your cooperation with my questions. Now, there is a better picture for me to explain to you.

The first I would like to talk about is antibiotics taken during her early age. In the first year after birth, the teeth are still developing and their layers are very sensitive to our health, whether it's fever, infection or some antibiotics.

Given that she had them, these back teeth are developing at that stage and unfortunately looks like it did affect its structure. We call this hypoplasia.

(If in the photo, incisors are also present with hypoplastic appearance, mention it too).

Hypoplastic teeth are weak on their own. And if other factors like poor oral hygiene and food or water consumption habits which are decay prone can worsen and accelerate the decay process to be near to the tooth nerve and the pain starts.

Any questions so far, Mr. Zhang?

I will have a thorough look at the rest of her, so that we can avoid pain in future.

Decay process is controlled primarily by our own efforts:

- **Oral hygiene habits:** Now you mentioned Mr. Zhang, she is doing well. However kids miss out on crucial areas to brush, floss. This we need to monitor. Also, kids have a liking towards eating the toothpaste, specially before age 6, eating toothpaste with fluoride in maximum amount can cause fluorosis, which is again leading to a compromised tooth structure.
- **Food and water:** Eating sugars is not just causing decay but the frequency of their consumption, acidic and sticky foodstuffs are not tooth healthy. So, to flush them out from teeth, we need good water intake, our own saliva does the job. There are few situations where our saliva is not healthy. Let me have a look and tell you about Alice's saliva.
- **Dentist visits:** As I mentioned earlier, to prevent any further stages of decay, dentist visits are advisable, also for kids to have a healthy relationship with dentists in future.

Any questions for me, Mr. Zhang?

Investigations:

I will begin with checking Alice's face profile if any swelling is visible.

Then, I will carefully look at the gums and the soft tissues in the area of pain. Then to understand what is happening below the gums and within the tooth, I will take one periapical X-ray, which is specific to that tooth. If that X-ray is uncomfortable I can start with bitewing X-ray and judge the area first.

I will also look at the rest of the teeth if they are affected because of antibiotics.

And for a future appointment, Mr. Zhang, can you fill up a diet chart of 7 days for me, so I can guide you on a teeth healthy diet for Alice.

Important points for this case:

- Alice's age and teeth affected as shown on photo should be carefully looked at.
- Check if it's hypoplasia or MIH. No need to talk about MIH, if incisors are not mentioned by a patient or shown in a photo.
- Check when the antibiotics were given. Because hypoplasia can be because of other reasons too.
- Explanation of risk factors by drawing a diagram would be better.
- Investigations are not commonly asked in bold in this case. So, cover the thorough history and the risk factors. After that if time permits mention investigations. As it's a cluster one case: investigations do have points.

Important links to read to understand this case better:

Enamel defects:

<https://aapd.org.au/resources/enamel-defects/>

https://digital.library.adelaide.edu.au/dspace/bitstream/2440/137305/2/hdl_137305.pdf

<https://www.aapd.org/globalassets/media/publications/archives/pascoe-16-03.pdf>

Ear infection, antibiotics and Enamel defects (dental caries/ hypoplasia/ MIH):

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6709956/>

https://www.safetyandquality.gov.au/sites/default/files/2024-05/Decision%20aid%20for%20consumers%20-%20Middle%20ear%20infection%20-%20Should%20my%20child%20take%20antibiotics_0.pdf

https://www.researchgate.net/publication/342717042_Use_of_Antibiotics_in_early_Childhood_and_Dental_Enamel_Defects_in_6-_to_12-year-old_Children_in_Primary_Health_Care

<https://www.sciencedirect.com/science/article/pii/S0300571222003700>

<https://www.aapd.org/globalassets/media/publications/archives/william2-28-3.pdf>

Water fluoridation and effects of different types of water on oral health:

<https://www.health.nsw.gov.au/environment/water/documents/fluoridation-questions-and-answers-nsw.pdf>

<https://www.filtersystemsaustralia.com.au/blog/post/how-different-types-of-water-affect-your-dental-health>

SILVER SET: CLUSTER 1

(Clinical Information Gathering)

INTERNATIONAL STUDENT HAS PAIN FROM BITING



Mr Sean Hobart, a 42 year old is an overseas student. He arrived in Australia 4 years ago, and is visiting your clinic today. He has been experiencing pain in one of his lower left teeth for the past 3 weeks. He works part-time while studying. While he cannot pinpoint the exact tooth, he notes that biting on that side exacerbates the pain.

You do an examination and observe a large MOD amalgam restoration on tooth 36, which was placed 22 years ago.

Gather information to help Sean, explain the necessary investigations, and discuss the possibilities for pain to address his concerns.

CASE:

Opening remarks/ Introductory statements:

Sean, I have a brief look inside the mouth, however could you describe more about this pain? Also Sean, you mentioned being an international student here. How are you finding it around after 4 years? (You can add a few more points about understanding how difficult it is for an international student, if time permits). Sean, I hope you have eaten well and slept since the pain began?

Exploring the chief complaint:

(If any question you ask in the opening remarks, if mentioned in the scenario or while initial description by patient, do not ask them again).

Site

- "Where is the pain?"
- "Can she point to the tooth or area in question?"

Onset

- "When did the pain start?"
- "Did it come on suddenly or gradually?"

Character

- "How would she describe the pain?" (e.g. achey, sore, throbbing, sharp)
- "Is the pain constant or does it come and go?"
- "Does pain aggravate on biting down?"

Radiation

- "Does the pain spread elsewhere?"

Associations

- "Are there any other symptoms that seem associated with the pain?" (e.g. bad taste, fever, discharge)
- "Any swelling around the gums or on the face observed?"
- "Any wobbly teeth appreciated?"

Time Course

- "How has the pain changed over time?"

Exacerbating or relieving factors

- "Does anything make the pain better?" (e.g. analgesics)
- "Does anything make it worse or trigger it?" (e.g. cold, touch, lying down, while biting, bending down)
- "Do you recall any experience that might have led to the start of pain?" (e.g. pain after biting on ice chips/cube, any hard foodstuffs?)

Severity

- "On a scale of 0-10, how severe is the pain, with 0 being negligible and 10 being the worst pain you've ever experienced?"

Relevant history and explanation of risk factors:

Thank you for your patience with all answers. And after having a look inside your mouth, to understand more about your pain, is it okay if I ask you a few more relevant questions?

1 Social History

Although it's been 4 years, life isn't too easy for an international student. How are you managing it with your studies, part-time job and university Sean? Do you feel a lot stressed because of all this? Are you aware if you grind your teeth?

The reason I'm asking, is most of the time our body reacts to the external stressors and we don't realise. In our mouth, it could be manifested as consciously or unconsciously grinding of our teeth.

If you need any assistance with stressful situations, I can provide you with contact details. To bring it to your attention, universities and workplaces offer support in stressful times through therapy sessions or even special programs. Have a word with the co-ordinator at work and university and they will guide you the best.

2 Medical History

When was your last medical check, Sean? Any medications or medical conditions that I should be aware of? Any allergies? (Blood test is not necessary to ask, however, if the patient did not visit the GP or had checked in the long time you can ask. Sean, you haven't had a check up in a long time and also with our busy lives, we miss out on healthy food. So, it would be best to get a blood test done.

3 Dental History

When was your last dental visit Sean? I noticed a big filling on one of your teeth in the area of pain. When was it done? Have you had issues with it in the past?

(If a patient says no - I can totally understand Sean, you haven't been to a dentist here, but there could be some medical or dental camps within university for students.)

Possible causes of pain:

Sean, thank you for your patience with my questions in this painful experience. Although I'm going to do my set of detailed examination and few tests, yet let me explain you few possibilities:

- **Cracked tooth syndrome:** I'm leaning more towards this as a possible reason for that as you have a massive silver filling on the tooth in that region. What happens with large silver fillings is that they tend to expand in your mouth, you can appreciate on the photo how it appears to be crawling on the tooth surface. And because of this pressure they tend to create cracks at the junction of filling and tooth. These cracks develop slowly over a period of time. And when the crack is closer to the nerve of the tooth, that's when you experience this pain that you are mentioning. Any questions Sean ?
- **Secondary decay leading to pulpitis:** We say secondary when decay is present on a tooth below the filling. And when that decay is closer to the nerves, it's a painful experience.
- **Trigeminal neuralgia** (If a patient says of having an electric shock pain only then mention this possibility): this is a facial nerve pain and gives electric pain. It is usually associated with trigger points over the face.

Investigations:

To make our suspicions clear, Sean I will perform a few examinations and tests.

To begin with outside the mouth, I will check your jaw opening and closure. Also check for any tenderness over your cheeks.

Now inside the mouth, I will thoroughly check the gums and soft tissues of the area. For gums, I will use my calibrated instrument to check the depths around the tooth for any gums issues.

Carefully look and use an instrument for teeth to check in that area.

Next, I will take a specific X-ray we call that as a periapical X-ray - to look out for decay below filling or any changes in the bone.

Also, because of suspicion of crack, I will perform a crack test using a tooth slooth. Which is one of the crack detection techniques. With that, I will place it over each tooth biting surface and see if you are experiencing similar pain.

Also to check the nerve status, it is best to perform a cold test. It would be uncomfortable, when I would place a cold cotton ball on the tooth surface. You will get a cold sensation or nothing, you can raise your hand and put it down when the sensation goes away. Depending on your reaction, I will judge the status of each tooth.

Important aspects of this case:

- Patient factors like international student, part time job, university stress need to be taken into consideration. And promote health with consideration of these aspects.
- Cracked tooth syndrome in silver fillings need to be explained with the diagram for patient understanding.
- Investigations to be explained with the rationale of each test.
- Promotion of health with patient factors and provisions within university and workplaces should be mentioned.

Important links to read to understand this case better:

Understanding cracked tooth:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4606573/>

<https://teeth.org.au/cracked-teeth>

<https://www.ada.org.au/event?eventcode=240217>

<https://onlinelibrary.wiley.com/doi/full/10.1111/adj.12959>

Amalgam fillings and cracks (read this only for reference)

<https://platinumdental.com.au/amalgam-fillings/>

SILVER SET: CLUSTER 2

(Diagnosis and Management)

VERTICAL ROOT FRACTURE IN A PATIENT (VERSION 1)



Mr./Mrs. Tiner, a 42-year-old new patient, is experiencing pain in his upper left first molar. Examination reveals a composite restoration on the tooth extending MOD. The tooth looks unrestorable and has an 8mm pocket depth on one side. The diagnosis is a vertical root fracture, and would require extraction of the tooth.

Mr./Mrs. Tiner has a medical history of asthma and arthritis and is currently taking Ventolin and 15 mg of prednisolone respectively.

Explain your diagnosis and outline the management plan for Mr./Mrs. Tiner.

Excluding the extraction procedure details.

SILVER SET: CLUSTER 2

(Diagnosis and Management)

VERTICAL ROOT FRACTURE IN A PATIENT (VERSION 2)



Mr./Mrs. Tiner, a 42-year-old new patient, is experiencing pain in his upper left first molar. Patient recalls eating on ice and then experiencing this pain. Examination reveals a composite restoration on the tooth extending MOD. The tooth looks unrestorable and has an 8mm pocket depth on one side. The diagnosis is a vertical root fracture, and would require extraction of the tooth.

Mr./Mrs. Tiner has a medical history of asthma and arthritis and is currently taking Ventolin and 15 mg of prednisolone respectively.

**Explain your diagnosis and outline the management plan
for Mr./Mrs. Tiner.**

Excluding the extraction procedure details.

CASE:

Introductory paragraph/ Empathetic statement:

Mr. Tiner, today isn't your finest day with the toothache. Could you tell me more about this experience? Mr. Tiner, how did you go with eating meals after you bit on the ice? And was your sleep affected? Any fever or swelling?

Did you take any pain medication?

I hope you will be out of this situation as soon as possible.
Also, are you carrying your asthma inhaler?

Relevant history for diagnosis:

From my examination in your mouth, I'm guessing one possibility to be most likely. However, to understand the possible causes, can I ask you a few relevant questions?

1 Dental History

The affected tooth has a big filling, do you recall how long ago was it done? Was any major treatment like RCT performed on that tooth? When was your last dental visit?

2 Social History

Do you know if you happen to grind/ clench your teeth? (If no - Has your partner ever mentioned that to you?)

You mentioned eating ice. Do you frequently do that?

Diagnosis explanation with risk factors:

Thank you for your patience with my questions.

I had a detailed look at the tooth and from my judgement, it possibly appears to be a vertical root fracture. As from the term, you could guess, it doesn't look quite promising.

To explain you best, let me show you with the help of a diagram.

This tooth of yours has a massive tooth coloured filling as we can see from the photo. When a lot of tooth structure is removed and replaced with a filling, a tooth becomes weak. And from what I understand, you mentioned biting down on the ice (mention if it's his continuous habit, grinding or clenching if present). The tooth already had developed a crack within the root portion. Why I say this is because while checking your gum depths, just at one point the gum depth was 8mm which normally ranges between 2-3mm. Because there was a crack in the root portion, the gum depth also increased.

I hope I'm helping you understand, do you want me to repeat anything?

Now we could imagine, on an already compromised tooth if you add pressure with ice, grinding or clenching, it's bound to fracture.

This is how a crack within a tooth became a vertical root fracture.

Any questions so far Mr. Tiner?

Relevant history for management:

Medical History

Also, you mentioned on our form, you have asthma and arthritis. How are GP follow ups going for the same? For arthritis, you are taking prednisolone, for how long have you been taking it?

Having said that, Mr. Tiner prednisolone is an external steroid for our body. When steroids are taken for more than 3 weeks, it does impact our general body. In a way, that landing into a medical emergency which we call an adrenal crisis. It could usually happen when our body is in a physiological stressful situation, which would only be understood by our body. Let's say we are going to perform a procedure of extraction for you, your body will unknowingly be in a fight and flight mode, and this would trigger landing into adrenal crisis, where your body's blood pressure and blood levels would drop even when you are asleep, risking your life to serious medical issues.

Because of this medical worry, Mr. Tiner, it is risky to perform extraction for you today. Moreover, to prevent such complication, we need to talk to your GP, to check for an action plan or need for an antibiotic prophylaxis. Also, it is advisable to be accompanied by a responsible adult for 2-3 days. Also, to carry your asthma inhaler for each appointment.

Management

There is a risk of a medical emergency with any major procedure. However, I would perform a temporary measure in the meantime to relieve you from this pain. Because there is pain on biting, I would place a small block of filling on the biting surface of the tooth to avoid teeth from biting down.

I will prescribe you medications, any allergies or interaction with medications in the past ?

Rx

paracetamol 1000 mg, you can take up to 4 doses at an interval of 6 hours until pain subsides. Please do not consume more than 3 tablets.

(If a patient has swelling or fever, you can check - only then give antibiotics).

Important links to read to understand this case better:

Vertical root fracture:

https://periomelbourne.com.au/?page_id=171#:~:text=Keeping%20a%20tooth%20with%20a,bridge%20or%20a%20dental%20implant.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4001262/#ref34>

Management:

https://www.researchgate.net/publication/12848017_Diagnosis_and_management_of_teeth_with_vertical_root_fractures

Prednisolone:

<https://www.healthdirect.gov.au/amp/article/prednisolone>

Refer to therapeutic guidelines for management and to understand adrenal crisis.

SILVER SET: CLUSTER 2

(Diagnosis and Management)

PATIENT HAVING FLUOROSIS IN TEETH



Kim, a 15 year old girl, visited your clinic today with concerns about white and brown patches on her front teeth. On examination, you observe these spots throughout the mouth. Kim lived in a rural area until the age of 10 and then moved to boarding school for further education. She mentions taking fluoride tablets until the age of 10 as advised by her mother.

Kim doesn't prefer drilling or any anaesthesia. She wants her teeth fixed quickly because she has a photoshoot for her sister's wedding in a few weeks.

Provide a diagnosis, treatment plan, and management strategy for her condition.

CASE:

Introductory paragraph/ understanding patient:

Kim, I did have a thorough look and believe you are keen on looking to get solutions for spots on front teeth.

Also, exciting times ahead for you and your family with your sister's wedding. To manage you best, Kim I need to understand what are your hopes and expectations with these teeth?

Thank you for that Kim, I will explain to you all possible treatment options, before that I will ask you a few relevant questions that will help me with your management.

Also, what caught my attention, Kim, you are 15 years old, are you accompanied by anyone today? And what about the treatment, are you going to be solely responsible for the finances? Kim, I like how you are independent, but because few options are invasive, it's best to discuss as our parents always think the best for us.

Relevant history:

1 Medical History

Kim, medically you are fit and well? Any medications or allergies that I should be aware of?

2 Dental History

You mentioned on our history form, you had fluoride tablets. Thank you for your information on that. (It's hard to recall, but do you remember if water in the rural area was fluoridated? Also, if you recall about the toothpaste you used as a child? - you can ask these questions, however, history taking has no points in cluster 2, so be mindful if time permits)

Exploring dental anxiety/ fears:

What caught my attention was your fear for dentists/ drills and needles. Kim, you are not alone with this fear, the majority of people have dentist fears and that usually is associated with a childhood correlation of dental experience, fear created by the community or because of needles.

I want to reassure you Kim, now because of advanced techniques and dentist awareness, changes are adopted. And I want to have a trustworthy relationship with you, to help you overcome this fear.

With respect to drill fears, you can bring your earphones or I can play some favourite music/ videos to help you be calm on the dental chair.

For your needle fears, we have a distraction technique to make the process smooth. Also, the advantage of using numbing gel beforehand helps with the sensation.

You can also bring along someone trustworthy for an appointment and stop me if needed at any stage. Do you think we can try this? I want you to have a comfortable experience and build a good relationship with you.

(We offer happy gas or laughing gas, nitrous oxide can help people relax during dental treatment - offer this only if patient has dental anxiety, not for only needle fears or drills)

Diagnosis:

Kim, from my judgement, the spots on your teeth are possibly because of excessive consumption of fluoride in childhood. We call them fluorosis.

The reason for this to happen is that early years of our life are when our teeth are still developing, and they are very sensitive. If fluoride is ingested in excess, it affects the structure of the tooth by being porous and stains are caught over it in the long run.

Are you following so far, Kim?

Initially Australian guidelines did approve fluoride tablets, however recently their use is not effective and is removed from guidelines. They could have been the primary cause of fluorosis.

Management:

For treatment options related to this condition depending on the severity of it, we proceed stepwise. In your situation from the looks of it, it appears to be a mild-moderate case of fluorosis.

Thus, we will begin with the least invasive technique.

- **Micro-abrasion:** This technique uses a paste and with my instrument I will rub it over the tooth surface which removes stains. To apply a CPP-ACP cream after the procedure to help with calcium ions to be taken up by porous structures. Advantage: Less invasive, quick results. Disadvantage: It won't take away all the stains and sometimes post-operative sensitivity experienced. Results may take 7-10 days to be effective.
- **Resin infiltration:** This is a procedure where the uneven surface and the stains are covered with the tooth coloured filling material without drilling. Only use of different agents. (draw a diagram of composite flowable for an understanding). Advantages: Results are seen immediately, comfortable procedure. Disadvantages: Slightly expensive and can obtain stains over them. It would need repair or polishing in a few weeks/ months.
- Kim, does your diet contain more coffee, tea or curries? If we proceed with this option, I would suggest taking a sip of water to minimise the effect of any stain.
- **Combination of both:** A combination would have an added advantage and more promising results.

Are you inclining towards any of these options? Please do not hesitate if you want me to repeat any of the information. Also, if you are not ready, there is no rush. You take your time to read about all the options, discuss it with your family if needed.

Health promotion:

With each procedure on teeth, care needs to be taken of them too. How do you look after your teeth, Kim? (Advise oral hygiene habits)

A visit to a dentist is recommended every 6 months, to prevent longevity of teeth and any treatment done.

Talk about this only if time permits:

Let's say you are still not happy with its results, then if you feel comfortable we can think of more invasive options which would require needles and drilling like composite veneer, porcelain veneer or crown. (Talk in detail about the following if time permits).

- **Composite veneer:** This involves slight polishing with a drill, only the lip surface of the tooth, followed by moulding tooth coloured filling to look aesthetic. We could consider numbing you, if needed.
- **Porcelain lab-made veneer:** It involves drilling to more extent than 1st option. The procedure is done in 2 appointments. Where adjustments are made on the lip side of the tooth and measurements are sent to the lab to get it fixed in the following appointment.
- **Crown:** It's more invasive than previous options. Again same like above the procedure is done in 2 appointments. Where adjustments are made on a complete tooth and measurements are sent to the lab to get it fixed in the following appointment.

Important features of the case:

- Age of Kim and urgency of the procedure, understand these aspects well.
- Management involves dealing with her drills and needle anxiety too.
- Consent will be needed if the patient is below or equal to 16 years of age.
- Bleaching is very common for stains, but the patient is below 18 years of age, so we do not recommend bleaching.

Important links to read to understand this case better:

Management of fluorosis:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2883808/>

<https://www.webmd.com/children/fluorosis-symptoms-causes-treatments>

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6857403/>

Understanding microabrasion in management of fluorosis:

https://www.tandlaegebladet.dk/media/1zliub00/tb10-2016_890.pdf

https://aacd.com/proxy.php?filename=files/Dental%20Professionals/jCD/Vol.%2034/issue%201/roble_lawson_34-1.pdf

Guidelines for use of fluorides in Australia:

[https://onlinelibrary.wiley.com/doi/full/10.1111/adj.12742#:~:text=The%202019%20Guidelines%20on%20water%20fluoridation&text=\(2\)%20Water%20fluoridation%20should%20be,0.6%E2%80%931.1%20mg%20FL](https://onlinelibrary.wiley.com/doi/full/10.1111/adj.12742#:~:text=The%202019%20Guidelines%20on%20water%20fluoridation&text=(2)%20Water%20fluoridation%20should%20be,0.6%E2%80%931.1%20mg%20FL)

<https://ada.org.au/policy-statement-2-2-1-fluoride-use>

Management of dental anxiety:

<https://www.betterhealth.vic.gov.au/health/conditionsandtreatments/dental-anxiety-and-phobia#how-to-manage-dental-anxiety-or-phobia>

<https://www.nhmrc.gov.au/about-us/news-centre/drilling-down-discovering-origins-dental-anxiety>

<https://researchonline.jcu.edu.au/75644/1/75644.pdf>

SILVER SET: CLUSTER 3

(Clinical Treatment and Evaluation)

PERIODONTITIS PATIENT HAVING DIABETES MELLITUS (VERSION 1)

PERIODONTAL CHART

Date 24/06/24

Patient Last Name Smith

First Name John

Date Of Birth 08/01/1979

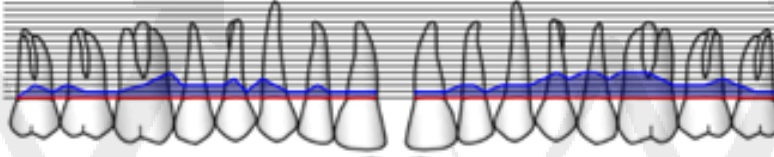
☒ Initial Exam

☐ Reevaluation


Clinician Dr. ABC

	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Mobility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Implant																
Furcation																
Bleeding on Probing	+		+					+	+					+	+	
Plaque																
Gingival Margin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Probing Depth	2	1	2	1	1	2	4	2	1	1	2	2	3	4	3	2

Buccal




Palatal



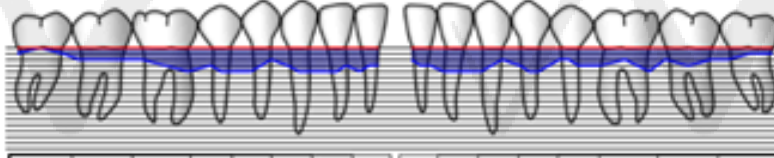
	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Gingival Margin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Probing Depth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plaque																
Bleeding on Probing																
Furcation																
Note																

Mean Probing Depth = 1.2 mm Mean Attachment Level = -1.2 mm 1 % Plaque 7 % Bleeding on Probing

Lingual



Buccal



	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Gingival Margin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Probing Depth	1	0	1	2	2	2	3	4	2	3	4	4	3	2	3	2
Plaque																
Bleeding on Probing																
Furcation																
Implant																
Mobility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SILVER SET: CLUSTER 3
(Clinical Treatment and Evaluation)
**PERIODONTITIS PATIENT HAVING DIABETES
MELLITUS (VERSION 1)**

Mr. John Smith, a 45-year-old regular patient, attended your clinic today with complaints of bleeding gums while brushing and sensitivity to cold. Upon examination, periodontal charting revealed 4 mm periodontal pockets around some teeth, leading to a diagnosis of generalised periodontitis.

His last dental visit was six months ago, during which a cleaning was performed, and he was informed by his previous dentist that he had mild gingivitis. He retired and hence John is visiting you.

His medical records indicate he is a type 2 diabetic who is not currently on any medication and has not visited a GP. He is also a smoker, smoking 10 cigarettes per day.

Manage patient concerns and explain treatment plan.

SILVER SET: CLUSTER 3

(Clinical Treatment and Evaluation)

PERIODONTITIS PATIENT HAVING DIABETES MELLITUS (VERSION 2)

PERIODONTAL CHART

Date 24/06/24

Patient Last Name Smith

First Name John

Date Of Birth 08/01/1979

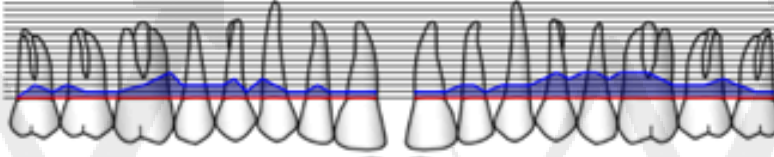
☒ Initial Exam

☐ Reevaluation


Clinician Dr. ABC

	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Mobility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Implant																
Furcation																
Bleeding on Probing	+		+					+	+					+	+	
Plaque																
Gingival Margin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Probing Depth	2	1	2	1	1	2	4	2	1	1	2	2	3	4	3	2

Buccal




Palatal



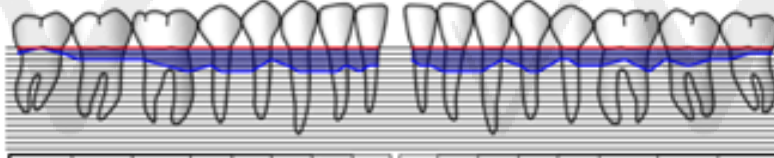
	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Gingival Margin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Probing Depth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Plaque																
Bleeding on Probing																
Furcation																
Note																

Mean Probing Depth = 1.2 mm Mean Attachment Level = -1.2 mm 1 % Plaque 7 % Bleeding on Probing

Lingual



Buccal



	18	17	16	15	14	13	12	11	21	22	23	24	25	26	27	28
Gingival Margin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Probing Depth	1	0	1	2	2	2	3	4	2	3	3	4	4	3	2	1
Plaque																
Bleeding on Probing																
Furcation																
Implant																
Mobility	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

SILVER SET: CLUSTER 3
(Clinical Treatment and Evaluation)
**PERIODONTITIS PATIENT HAVING DIABETES
MELLITUS (VERSION 2)**

Mr. John Smith, a 45-year-old regular patient, attended your clinic today with complaints of bleeding gums while brushing and sensitivity to cold. Upon examination, periodontal charting revealed 4 mm periodontal pockets around some teeth, leading to a diagnosis of generalised periodontitis.

His last dental visit was six months ago, during which a cleaning was performed with an electric toothbrush. He was informed by his previous dentist that he had mild gingivitis. His last dentist retired and hence he is visiting you now.

His medical records indicate he is a type 2 diabetic who is not currently on any medication and has not visited a GP. He is also a smoker, consuming 10 cigarettes per day.

Manage patient concerns and explain treatment plan.

CASE:

Introductory paragraph:

John, I had a detailed look inside your mouth. I want to appreciate how you have visited the dentist every 6 months. I hope to create such a trustworthy relationship with you like your previous dentist.

Could you tell me more about your concern of sensitivity and bleeding gums? After my examination, there were a few areas which caught my attention.

Explanation of findings and diagnosis:

You heard me call out numbers, those were gum depths. These numbers usually range between 2-3 mm which is considered normal. However, in your case it is ranging 4-5 mm in most areas of your mouth. We term it as generalised moderate periodontitis. I would say generalised because most of the areas of your mouth are affected and moderate periodontitis, because the numbers are in a moderate stage of gum and bone disease which is periodontitis. Any questions so far, John?

John, it is concerning at this stage because we do not want these borderline numbers to turn into something serious. Moreover, the supporting structure of the tooth which is gums and bone is affected now, we want to maintain it, as these are the foundation of our teeth.

John, what thoughts are going in your mind about this?

Understanding risk factors/ relevant history:

To understand why this could be happening to you, there are few factors which you have mentioned in our form. But, is it okay if I ask you some relevant questions to explain it to you?

1 Medical History

You mentioned having diabetes but are not on medication. Why is it so John? Diabetes has a huge impact on our oral health. Diabetes has a two way relationship with gum and bone disease. Moreover, if it's not controlled it can affect our gums and bone drastically. Hence, John I would highly recommend you to visit your GP and get the blood test done, to understand and control your health as well as your gum disease. What do you think about this, John ?

Any other medical conditions or medications that I should be aware of ?

2 Social History

Also, John, you happen to smoke around 10 cigarettes per day. Thank you for being honest. John, we all know smoking is not encouraged as it has impacts on our general health but it's more impactful on our oral health by acting on gums and bones. And the effect on oral health would be silent and won't go noticed as smoking also reduces the blood supply and body's response to fight against any foreign agent. Are you with me so far, John?

I couldn't stress more on how important it is to quit smoking. And John, I do understand it won't be easy to quit smoking, however I want to extend my support to you whenever you are comfortable discussing quitting. We don't even want to take big steps, let's begin slowly by reducing the cigarettes per day. I will provide you with all the brochures on how smoking and diabetes have effects on our oral and general health. If you have any further questions, I will help you John.

3 Dental History

Also, I want to understand how you look after your teeth. Do you use anything to clean in between your teeth? I would highly suggest focusing on cleaning in between teeth well because those areas are missed out and that's where the beginning of gum and bone disease is. (Depending on what he/she says, modify that risk factor accordingly). John, I understand you are trying your best, however, I will go through with you the most effective techniques to clean our teeth.

Clinical treatment and evaluation:

After understanding the possible causes, John, let's look at how we can control and treat you. In your situation, John, we will need combined efforts from you and me.

Your concern of sensitivity and bleeding is because of the gum and bone disease. This will require a holistic approach. Bleeding is happening because of your angry gums. They need to be cleaned thoroughly, by which I mean a deep clean. This clean requires numbing because it won't be comfortable for you. However, what refrains me from going ahead with this is your diabetes status. At this stage, we are not aware whether your diabetes is controlled or uncontrolled. Because you haven't been on medication, chances of having u controlled diabetes is more. If I go ahead with a deep clean today, you are going to bleed a lot and have wounds. Uncontrolled diabetes can leave you with unhealed wounds and that can further be a pathway for infection. Thus, I would suggest we do a superficial clean for you and you can visit your GP, get a blood test done and start with medications accordingly. And once we know the status of your diabetes, we can plan your deep cleaning schedule. How does it sound, John?

For your sensitivity, I would suggest using sensitivity toothpaste and I will review you after 3 months.

John, in the long run. We need to be on top of our oral hygiene habits, looking after our general health and controlling diabetes, controlling and quitting smoking and last but not least regular dentist visits of deep cleaning for 3 months until the condition stabilises.

Important features of the case:

- Patient is negligent about his medical health, stressing the importance of medical health impact on oral health.
- Patients would want to complain about the previous dentist - because the dentist is retired - complaint process through HCC (Health complaints commissioner) for Victoria and Ombudsman for Queensland.
- Whether as a treatment for today, you decide to perform superficial clean or not, that is okay. As long as you can justify reasoning for your statement.
- Short term and long term treatments both to be explained.

Important links to read to understand this case better:

Dental complaints:

<https://ada.org.au/policy-statement-5-4-complaints-resolution>

[https://www.dentalprotection.org/docs/dentalprotectioninternationallibraries/dental-advice-booklets/dental-advice---handling-complaints-\(au\).pdf](https://www.dentalprotection.org/docs/dentalprotectioninternationallibraries/dental-advice-booklets/dental-advice---handling-complaints-(au).pdf)

Diabetes and periodontitis:

<https://australianprescriber.tg.org.au/articles/diabetes-and-periodontitis.html>

https://treasury.gov.au/sites/default/files/2019-03/australian_dental_association_-_supporting_document.pdf

<https://www.diabetesaustralia.com.au/living-with-diabetes/preventing-complications/dental-health/>

Smoking and periodontitis:

<https://www.betterhealth.vic.gov.au/health/healthyliving/smoking-and-oral-health#smoking-and-gum-periodontal-disease>

Smoking and periodontitis:

<https://www.betterhealth.vic.gov.au/health/healthyliving/smoking-quitting-tips>

SILVER SET: CLUSTER 3
(Clinical Treatment and Evaluation)
**POST-OP INSTRUCTIONS TO A
PATIENT ON ELIQUIS**

Mr. Mathew Woods, a regular patient at your clinic, visits you for an extraction of mobile upper canine. You performed the procedure, hemostasis gel was applied, and a suture was placed to ensure proper healing.

Medical history: He is currently on eliquis to prevent stroke, and after consulting it with his GP, it was decided not to discontinue the medication before the extraction. Three years ago, when you performed previous extractions, he was not taking eliquis. Additionally, he smokes 25 cigarettes a day.

Provide him with post-extraction care instructions and inform him of potential complications that may arise.

CASE:

Introductory paragraph:

Mr. Woods, I will get you to bite down on this gauze piece and sit you up here, how are you feeling? The tooth is out successfully as we planned. I have placed a healing agent in the tooth removal site and have sutured it. Both healing agent and sutures are dissolvable, so don't worry about it. However, we will still have recalls to monitor your healing progress. Any questions as of now Mathew?

Explanation of immediate management:

We have removed a tooth for you before, so you are very well aware of how things go about, but there is one important factor of the medication that you are taking. As we have discussed earlier with your GP, Eliquis is a blood thinner. And we require blood to form a clot at the extraction site. Therefore, now I'm going to observe your bleeding for 20 minutes more. In the meantime, I will also discuss with you some instructions and precautions.

Are you comfortable Mathew ?

If after 20 minutes, I happen to still see blood oozing, then I will change the gauze and ask you to bite down again with pressure. Remember, always pressure is the first thing to stop bleeding. Hence, I will provide you with 3 sterile gauze pieces for home use. Other than just pressure, I will judge the flow of bleeding and decide whether to soak that gauze in tranexamic acid mouthwash, as it will help with the control of bleeding. Then, you can throw a gauze piece in the bin after 30 mins of pressure.

Post-operative instructions:

We understand, there are a lot of instructions to follow and understand. Hence, I will be providing a written pamphlet with all details alongside my verbal instructions.

To begin with, the first 24 hours are most crucial. It is because the initial healing process starts and we have to be careful for it.

- The effect of numbness will wear off after 2-3 hours, be careful when you eat or drink while being numb, as you can bite your lips or cheeks. I will advise to not use straw to drink anything as it will prevent healing.
- Eat only room temperature and a soft diet for the 24 hours. Avoid hot because it will trigger bleeding and delay the healing process.
- Before the effect of LA wears off, you can eat an ice cream or smoothie and eat painkiller medication as I will prescribe you.
- Why I said to eat medication, is because pain and swelling is common in the first 72 hours after tooth removal as your body is grieving the loss. You will be at more ease after medication and sleep well. Any updates about the medications or interactions, since the last I saw you? I will prescribe you Paracetamol 1000 mg, you can take that no more than 4 times a day.

- For swelling, you can apply a cold pack on swelling for 10 minutes every hour to help.
- Also, avoid rinsing or spitting out for 24 hours to not disturb the initial clot formation.
- I will still encourage you to brush your teeth however, while spitting or rinsing, just take some water and open your mouth for it to flow naturally out of your mouth rather than actively spitting.
- Take it easy for a day, no vigorous activities.
- Mathew, with smoking. We did discuss it, for healing to be undisturbed. We need to quit smoking for 10 days minimum. These 10 days are most crucial for healing. As smoking it creates heat within the mouth and reduces the blood supply for healing.

Any questions so far Mathew?

- Do you drink alcohol Mathew, same goes to alcohol avoid drinking for a minimum of 2 days, for great healing.

Any questions for me Mathew, all good so far?

- I will review your healing in 3 days, in that appointment, or in one week's we can also discuss the replacement options for your space.

Potential complications:

Each procedure comes with potential complications which can be controlled or managed.

Bleeding is a normal process, after tooth removal. Because of the Eliquis, you are at higher risk of bleeding/ spontaneous bleeding. If at all that happens, with the extra sterile gauze, apply pressure by biting onto it. Make sure you are applying pressure at the area of bleeding. Check for 15 minutes, if it stops then best, however, you can repeat the process for 3 cycles of 15 minutes. Also, please wash your hands and use sterile gauze to avoid decontamination. You can give us a call at the clinic during working hours, if bleeding still doesn't stop. If it's not working hours, I will suggest giving the ambulance a call and going to the hospital. As medical intervention will be needed. Do not worry I will write down all the emergency contact details for you.

Are you okay, Mathew?

Other possible complications in your case could be:

- Post-operative infection is possible when swelling and pain continues after 3 days. Infection could be because of external factors or our own body unable to fight any infection.
- Dry socket is a painful condition, which happens after 3-5 days. Pain is because of failure to form an initial healing clot. The reason for that could be failure to follow instructions in the first 24 hours and mainly because of smoking. It is rare with the upper jaw, but can still happen.

And we will see you for a regular check up and clean, so we could save your teeth. No replacement is as good as a natural tooth.

Important features of the case:

- While explaining, frequently ask how he is doing ? As, he just had an extraction.
- Stepwise explanation and not to forget about recalls, discussion on replacement options and also, regular check up and clean.
- Discuss only complications related to him.

Important links to read to understand this case better:**Eliquis:**

<https://www.healthdirect.gov.au/medicines/brand/amt,933234191000036106/eliquis>

Risks post extraction if taking eliquis:

<https://pdf.sciencedirectassets.com/271043/1-s2>

Management of postoperative bleeding:

From Therapeutic Guidelines.

Post Operative instructions after tooth removal by Australian government:

https://www.dental.wa.gov.au/pdfs/DHS14%20Instructions%20following%20extraction%20of%20teeth%20A4_English.pdf