

To treat or not to treat?

Case Presentation

Louise Gallagher – Dental Nurse

Royal Hospital for Neuro-Disability, London, UK

Background

This case describes the care of a 64 year old female with a severe neuro-disability. Although 64 may not be considered old, she could be described as physiologically older due to her medical conditions. At the age of 3 she was diagnosed with epilepsy and in March 2004 after suffering multiple seizures a CT scan of her brain showed signs of early hydrocephalus. Further imaging with MRI revealed a haemorrhagic infarct as a result of the cerebral oedema. As a consequence the patient has a severe physical disability, and requires the use of a wheelchair. She is in long term care at The Royal Hospital for Neuro-disability. The patient has communication impairment and is unable to consent to treatment. She is doubly incontinent with a PEG for feeding and has a tracheostomy in situ. Due to persistent attempts to remove her tracheostomy and PEG, and climb over the cot sides of her bed she requires constant 1-1 nursing care.

Presenting Problem

Nursing staff were concerned about the inside of her mouth as she had large calculus deposits on the lingual surfaces of the teeth which they felt posed as an aspiration risk.

Clinical details

Dental examination was limited due to compliance, however it was possible to see that there was extensive calculus that covered all of the surfaces of the anterior teeth and was causing the tongue to be lifted in the mouth. After a careful risk assessment it was felt that it would be best for the patient if the calculus was removed to enable the staff to provide good mouth care and to prevent the calculus increasing in size. Due to the size of the calculus and its interference with the tongue it was thought that if removed, the mouth would be more comfortable for her.

Scaling was attempted, but not completed as there was a great concern over patient safety due her movements and the dental instruments that were being used. There was also the risk of aspiration. A decision was made to treat the patient under IV sedation.

Clinical management

The treatment plan was to provide scaling and a full extensive examination once the calculus was removed. The patient would be sedated using midazolam intravenous sedation, to help with her movements. The treatment plan was discussed with the patients multi-disciplinary team for any contra-indications and with her daughter. With all parties in agreement that the treatment was in her best interest the necessary appointments were made.

At the appointment the patient presented with oxygen saturations of 93% and a blood pressure of 116/65.

A cannula was placed in the right dorsum of the hand and 6mg of Midazolam was titrated over 10 minutes. The patient sedated well and her movements settled.

The calculus was removed using the ultrasonic scaler in short bursts with suctioning and gauze to protect the airway at all times.

The extent of the calculus was impressive and looked like a preserved fossil with a clear image of the teeth that it covered.



Figure 1: photo of the size of dental calculus compared to dental mouth mirror



Figure 2: photo of the calculus showing a perfect imprint of the teeth

Once removed it was possible to examine the teeth. Fortunately all were firm and non mobile and the soft tissues were healthy. Her sats remained stable throughout the procedure. She recovered in her wheelchair and was discharged into the care of a nurse from the ward.

Discussion

Due to the patients complex medical history the question was **To treat or not to treat?** To enable us to answer this we needed to consider the risks vs the benefits.

Risks

Possibility of patient desaturating, will need to provide supplementary oxygen via tracheostomy.

The patient is PEG fed so the calculus will return.

Patient is at high risk of aspiration during treatment and needs excellent suctioning

Benefits

The removal of the calculus would allow an extensive exam of the team, which is currently not possible.

The patients mouth would be more comfortable, allowing the tongue to resume its normal position.

Ward staff would be able to brush the teeth and provide good oral hygiene. This is not possible in its current state.

If good oral hygiene can be maintained it will reduce the risk of aspiration pneumonia.

The midazolam should reduce patients involuntary movements and make treatment safer.

Conclusion

All patients deserve the right to good oral health and people with a neuro- disability are at greater risk of aspiration pneumonia. Patients who are PEG fed tend to build up calculus and it is important that nursing staff provide good mouth care. Removing calculus may be considered non-essential but in this case was cause for concern. The case describes the benefits of working with the MDT, the safe use of IV sedation and the importance of chair side assistance especially with regards to suctioning for a patient with dysphagia.