Initial Assessment, Management and Referral of Common Maxillofacial Presentations: Dental Abscess

TARGET AUDIENCE	Primary and secondary care clinicians
PATIENT GROUP	All adult and paediatric patients

Clinical Guidelines Summary

1) The clinical spectrum of odontogenic infection ranges from pulpitic dental pain without spreading infection in the soft tissues, to severe life threatening complications involving numerous fascial spaces.
2) In otherwise healthy patients, the vast majority of dental infections can be managed as an outpatient by the patient's own dentist.
3) If the patient is a long term inpatient with acute dental problems then they can be reviewed by the Public Dental Service based in Coathill Hospital (Tel: 01698 753673).
4) A small percentage will require review by Oral and Maxillofacial Surgery (OMFS) due to the risk of airway compromise, sepsis or cavernous sinus or mediastinal spread.

Guideline Body

Presentation

1) Dental pain with or without facial swelling is the most common presenting symptom.
2) Symptoms of systemic infection may be described.
3) Concerning symptoms/signs including sepsis, dysphagia, severe trismus, drooling, altered speech/voice or altered mental status suggest the need for prompt referral and operative management.

Assessment

1) Initial A-E assessment due to risk of airway compromise or life threatening sepsis.
2) Examination of the head and neck should note the following features:

- Swelling- site, size and fluctuance/firm/soft.
- Is swelling extending down neck or up to the eye?
- Can the lower border of the mandible be palpated?
- Skin erythema and spreading cellulitis
- Trismus
- Is the floor of mouth raised?
- Deviation of uvula
- Altered neurology (particularly cranial nerves III, IV, V and VI)

Investigations

1) In the case of clinically obvious minor odontogenic infections that are suitable for management in general dental practice, no hospital based investigations may be necessary.
2) If the patient is being considered for referral to OMFS then the following initial investigations are indicated:

- Orthopantomogram (OPT) radiograph
- FBC, CRP, U+Es, Glucose +/-blood cultures

3) Further imaging may be requested after discussion with OMFS

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Which patients require admission?

1) Referral to OMFS and emergency admission will be required for patients with:

- Signs of airway compromise
- Signs of significant systemic infection
- Significant infraorbital (difficulty opening eye), floor of mouth or submandibular swelling
- Firm swelling/collection
- Spreading orbital, face or neck cellulitis
- Neurological signs (suggestive of cavernous sinus thrombosis or brain abscess)

2) OMFS referral/admission may also be required for the following patients based on clinical judgement:

- Very young/elderly
- Immunocompromised
- Signs of systemic infection

Management of patients not requiring admission

1) As suggested above most odontogenic infections are managed in general dental practice.
2) Antibiotics are generally not indicated for otherwise healthy people at low risk of complications when there are no signs of spreading infection. The primary treatment is incision and drainage and removal of the source of infection. It is acknowledged that this treatment is frequently not possible in the medical hospital setting.
3) Antibiotics may therefore be considered for people who are systemically unwell, for those with signs of severe infection (for example fever, lymphadenopathy, cellulitis, diffuse swelling) or for high risk immunocompromised individuals.
4) See Lanarkshire OMFS Antimicrobial Guidelines for appropriate antibiotic choice. Always emphasise the need to attend a dentist as soon as possible for definitive treatment.
5) Patients who are registered with a dentist should contact their dental practice to arrange an emergency appointment. If the patient is not registered with a dentist then they can access emergency dental care via NHS 24.

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Management of patients who require admission

1) ABCD emergency management as appropriate
2) Involve senior anaesthetic assistance early if threat of airway compromise
3) Intravenous (IV) dexamethasone 6.6mg if airway concerns
4) Investigations as above and refer OMFS (see below)
5) IV antibiotics
    - See Lanarkshire OMFS Antimicrobial Guidelines
6) Ensure NBM until OMFS review and consider IV fluids

How to refer a dental abscess acutely to OMFS?

1) The OMFS on-call service is based in neighbouring health boards (FVRH and GGC) and Monklands switchboard can help direct calls
2) In-hours (8am-5pm):
    (i) Monday-Thursday- on-call service based in Forth Valley Royal Hospital (Tel: 01324 566000, Bleep: #1143)
    (ii) Friday- on-call service based in Queen Elizabeth University Hospital Glasgow (Tel: 0141 201 100, Bleep #17666)
3) Out-of-hours:
    (i) On-Call SHO can be contacted through Monklands switchboard with an on-site ANP triaging calls from 10pm

References/Evidence

1. Kerwala C, Newlands C, editors. Oral and Maxillofacial Surgery (Oxford Specialist Handbooks in Surgery). 2nd ed. Oxford: OUP Oxford; 2014.
2. Payne KFB, Goodson MCG, Tahim AS, Ahmed N, Fan K. On-Call in Oral and Maxillofacial Surgery. 2nd ed. Enfield: Libri Publishing; 2015.
3. Sadler A, Cheng L. Dentist on the Ward. 6th ed. Sorejaw Publishing; 2015.

Appendices

1. Governance information for Guidance document

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CHANGE RECORD			
Date	**Lead Author**	**Change**	**Version No.**
		e.g. Review, revise and update of policy in line with contemporary professional structures and practice	1
			2
			3
		.	4
			5

2.You can include additional appendices with complimentary information that doesn't fit into the main text of your guideline, but is crucial and supports its understanding.

e.g. supporting documents for implementation of guideline, patient information, specific monitoring requirements for secondary and primary care clinicians, dosing regimen/considerations according to weight and/or creatinine clearance