Down's Syndrome Association
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Annual Health Check Information for GPs

Dental

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Below is Down's syndrome specific information. The information is for GPs and is to be used alongside DSA's Adult Health Book.

Oro-facial and skeletal problems

- Development of oral structure and function is altered, leading to compromised development of suckling, speech and mastication
- The midfacial region may be underdeveloped:

Maxilla: Bones are smaller. Mouth breathing can occur due to smaller nasal passages. Tongue is usually fissured and may protrude due to a narrow dental arch. This can contribute to halitosis.

Palate: Usually narrow and highly vaulted. This means tongue space is restricted which can also compromise speech and mastication (chewing).

Lips: Can be fissured due to chronic mouth breathing. Hypodontia (missing teeth) can cause the lower lip to protrude. Increased drooling together with a chronically open mouth can enhance risk of angular cheilitis (see later)

- Tonsils and adenoids are usually enlarged

Oral medicine

- **Oral Ulceration**
  Apthous ulceration is common in individuals with Down Syndrome (DS). Oral cancer can present with an ulcer. Therefore if an ulcer has been present for longer than **two weeks** an **urgent referral** for assessment by a Maxillofacial surgeon or Oral Medicine specialist is required. This is more common in older patients who smoke and drink in excess.

- **Oral Candidiasis and Angular Chelitis** - *(soreness in the corners of the mouth caused by bacterial and/ or fungal infection). This can occur after antibiotics have been prescribed.*

To prevent this, rinsing is important after the use of steroid inhalers. Treatment – Miconazole gel *(interactions)* or Fusidic acid cream, bloods for (vitamin deficiency, anaemia) swab infected area for culture and sensitivity testing and/or referral to dentist or Oral Medicine department.

- **Acute necrotising ulcerative gingivitis**
  This is a chronic gingivitis (gum inflammation) caused by anaerobic bacteria, and it presents with halitosis and inflamed painful gingivae. Requires referral to a dentist - interim measure 0.2% Chlorohexidine Gluconate mouthwash, thorough oral hygiene with a soft toothbrush.

Tooth Morphology

You may see the following features:

- Delayed eruption
- Hypodontia/ anodontia. (This where some/all teeth are congenitally missing).
- Irregularities in tooth formation e.g. hypoplasia (weak enamel).

Malocclusion

- Common among people with DS
- Usually a consequence of delayed eruption and small underdeveloped maxilla
- Open bites are common causing teeth to be poorly positioned
- May require treatment by an orthodontist

Bruxism / Temporomandibular (TMJ) joint disorders

- Involuntary or voluntary grinding/clenching of teeth.
- This can often lead to tooth wear. In moderate/severe cases it can lead to tooth ache.
- Can be complicated by acid erosion (e.g. GORD).
- TMJ pain dysfunction syndrome - exacerbated by bruxing/ tooth grinding and causes discomfort and facial pain which can present as earache, toothache, headaches, muscular tension in the head and neck and jaw clicking.
- Requires referral to a Dentist for diagnosis. Interim measures can include hot/cold compresses, temporary soft diet, and ibuprofen orally or topical gel.
- It can cause unpleasant noises and may be a reason for why family/carers seek professional help.

Periodontal problems

- Periodontitis is inflammation of the tissues that support the teeth.
- Down Syndrome patients may develop more severe forms of the disease than the general population.
- Immunodeficiency factors play a role.

" Children with Downs Syndrome are susceptible to a more generalised aggressive form of periodontitis due to immunodeficiency ... if untreated will result in tooth loss" (*Oral care of people with learning difficulties)*

- Particular medications can lead to gingival hyperplasia (enlarged gums), in particular epileptic medications.
- Oral Hygiene and other preventative measures are essential and must be monitored due to the patient's risk status.

Caries (Tooth Decay)

- Caries or tooth decay risk has been previously reported as low in patients with DS, however there are increased risk factors and treatment of tooth decay may be more complex in patients with Downs Syndrome, therefore preventative measures are essential.
- Due to possible delayed tooth eruption, problems in primary (baby) teeth need to be treated promptly as the deciduous teeth may need to be retained for longer.
- DS patients tend to mouth breathe which causes a dry mouth *(Xerostomia*), and a decreased amount of saliva which has a protective effect against tooth decay and aids the clearance of food. Decreased muscle tone leads to inefficient chewing of food, and food may remain on the teeth after consumption. The decreased clearance of food can increase the risk of developing caries.
- Patients who have Xerostomia- *a sensation of dryness in the oral cavity,* benefit from regular sips of water *(ensure the drink is not sugary).*
- Tailored oral hygiene advice and dietary advice are the core pillars of prevention, which include regular effective tooth brushing, interproximal cleaning and reducing the consumption of sugary food and drinks. A dentist is best placed to provide advice on these aspects of prevention and deliver other prevention measures such as fluoride application.
- Patients may require assistance with tooth brushing. Adjuncts can be purchased such as finger shields, three sided toothbrushes and specially adapted handle grips. More information can be sought from the dentist.

Useful Points

- If a patient is going to have a procedure that requires a General Anaesthetic, try to ensure that a dental assessment has been done prior to this, as dental treatment could be done at the same time, preventing the need for repeat general anaesthesia.
- Patients with DS can often be treated in general dental practice. If a patient requires assessment the patient can be referred to the local COMMUNITY DENTAL SERVICE (which can be found through the Local Area Teams via the NHS CB) who may then advise the patient to find a general dental practitioner if this is appropriate.
- Dental problems which remain untreated can have serious consequences including systemic infections, therefore if a patient presents to a surgery with a problem of a dental nature it is imperative that they are referred to see a Dentist for assessment.

Further information and references

Clinical Guidelines and Integrated Care Pathways for the Oral Health Care of People with Learning Disabilities 2012
https://www.rcseng.ac.uk/publications/docs/clinical_guidelines_oral_health_care.html

National resource centre for orofacial aids and appliances for persons with disabilities.
http://mun-h-center.se/EN/Mun-H-Center/Mun-H-Center-E/

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The Down's Syndrome Association (DSA) is the only organisation in England, Wales and Northern Ireland which supports people with Down's syndrome at every stage of life.

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Publication date: February 2013
Publication reviewed: October 2015