

## ***The Importance of Dental Care for Individuals with Thalassaemia***



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### ***Thalassaemia and the Dentist***

In the United Kingdom, thalassaemia almost exclusively affects people of certain ethnic origins (Mediterranean, Asian, Middle Eastern and African). As a result, many dentists may not have experience in treating a patient with this condition. Fear of the unknown may be associated with a reluctance to provide anything other than basic dental care. Indeed, many general dentists may prefer to refer these patients to either the community dental services, or to hospital-based specialised dental units (special care dentistry, paediatric dentistry, oral surgery), especially when extractions of teeth are required. When dental treatment is provided, the dentist may not be fully aware of the impact of thalassaemia on dental management, and so may not liaise with the haematologist when appropriate.

### ***Oro-facial features***

Many orofacial features have been described in thalassaemia, and include:

- Enlargement of the upper jaw (chipmunk face)
- Migration and spacing of upper anterior teeth (Figure 1)
- Varying degrees of malocclusion (overbite, open bite)
- Teeth may be discoloured, with short crowns and roots
- Higher rate of dental decay
- Pale gums and mucosa / lining of the mouth (due to anaemia)
- Sore or burning tongue (due to folate deficiency)
- Painful swelling of salivary glands and dry mouth

- Reduced salivary protection (reduced IgA)
- Tooth bearing bone may have a 'chickenwire-like' radiological appearance



Figure 1 – Migration and spacing of the upper anterior teeth

It is important that both patients and dentists are aware that these features may be present, so that an earlier diagnosis can be made and appropriate care can be provided. The main oral change that has been reported in the literature is malformation of the facial bones due to marrow expansion. This results in enlargement of the maxilla (upper jaw), and the characteristic appearance known as a 'chipmunk face'. It may be associated with spacing of the upper teeth and rotation or forward drift of the upper front teeth (maxillary incisors). Orthodontic treatment (braces) or cosmetic dentistry may be required to correct this in some cases.

### ***Dental decay***

Studies have shown that patients with thalassaemia have a higher rate of dental decay. The reasons for this may be that patients have difficulty accessing regular dental care, or may be reluctant to attend if they feel the dentist does not understand their condition. However, it may also be because patients are more concerned with the potentially serious medical complications of thalassaemia, and hence pay less attention to their teeth. Financial and time constraints may also contribute.

Although the higher rate of dental decay means that there is an increased need for restorative dental treatment (fillings), care may only be sought at a late stage when individuals experience pain and try to access emergency dental services. In this situation, the dental decay is often advanced, with the risk of an abscess and infection spreading into the tissues of the face and neck. Unfortunately, as a consequence of late

presentation, dental extractions may be more likely to be provided than fillings, leading to individuals losing more and more teeth.

### ***Dental care***

Dental care should be delivered as a coordinated team approach, ensuring close liaison between the dentist, the haematologist, and where appropriate, the paediatrician. Although specialist dental services do exist within the community dental services and some hospitals, these are limited and often require referral either from a general dentist or a doctor. Indeed for most patients with thalassaemia, general dentists can provide routine dental treatment using local anaesthesia without problems. However, the use of general anaesthesia is best avoided due to the risks associated with underlying anaemia. When general anaesthesia is absolutely necessary, it should be carried out as an in-patient procedure, with the patient admitted under joint care with the haematology team.

Other considerations which may need to be taken into account include:

- If a patient has had a splenectomy - these individuals are at risk of infection following any procedures associated with bacteraemia (most notably dental extractions or scaling); antibiotics may be prescribed to prevent this
- recurrent exchange transfusions – heparinisation, risk of carriage of blood-borne viruses
- cardiomyopathy (heart disease due to effects of iron deposition)
- medication related side effects

The most important principle of dental care is that prevention is better than cure. It is therefore extremely important to keep teeth and gums in as clean and healthy a state as possible by brushing teeth twice a day with a medium textured small headed toothbrush. Occasionally, the dentist may recommend an electric toothbrush, and will be able to advise which ones are suitable. Regular check-ups with a dental surgeon are essential to ensure that problems can be picked up early stage and treated before acute infections arise. Individuals with thalassaemia who present with acute dental infections / abscesses should be treated at the earliest opportunity, especially if they have had a splenectomy.

If the person is not registered with a dentist, they should seek emergency care from their local hospital, where there may be an emergency dental service or an oral surgery team who can prescribe antibiotics until suitable care can be arranged. Alternatively, their general medical practitioner may be able to assist.

### **Summary**

It is important that both dentists and people with thalassaemia understand the implications of this condition on oral and dental health. The key to management is the prevention of oral disease. It is essential to visit a dentist regularly, so that any problems can be detected and managed early.

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