

GP IN-SYNC

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NUH GP Liaison Centre



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Featured Doctors of the Month

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Dr Wong is an oral and maxillofacial surgeon. He completed his specialty residency training in Singapore on an ASEAN postgraduate scholarship and did his subspecialty training in Advanced Orthognathic Surgery in the Sunderland Royal Hospital, Sunderland and Morriston Hospital, Swansea, Wales.

His clinical practice ranges from dentoalveolar surgery to correction of dentofacial deformities.

Dentistry: More than Just Teeth-Mouth, Jaws and Face

The common layperson's perception of dentistry is that of teeth-repair (filling), removal (extractions) and replacement (dentures and implants). There are other branches of dentistry that are less well-known e.g. forensic dentistry, oral medicine, oral and maxillofacial surgery, oro-facial pain and dental public health among others.

Dentistry arose from the same roots as surgery; the barber surgeons also performed some rudimentary dentistry. The first specialty of dentistry was Oral Surgery, exodontists who also found they needed to treat dental disease surgically.

Since the mouth does not end at an artificial boundary defined by men, over time, there arose a need to go beyond the oral cavity and Oral Surgery expanded to become Oral and Maxillofacial Surgery (OMS).

Common Oral Conditions Seen

Many conditions present in the oral cavity and the benefit of having dental training allows the OMS clinician to diagnose and treat diseases that are unique to the mouth.

Lumps and bumps in the oral cavity can range from salivary gland origins (mucocele), dermatologic associations (oral lichen planus), oral dysplasia (pre-malignant lesions) to infections of odontogenic origins (diseased teeth) and cystic or tumours of both odontogenic and non-odontogenic origins.

Figure 1



A Minor salivary gland mucocele of the lip.



B Pleomorphic adenoma of the minor salivary gland of the palate.

Figure 2



A Pyogenic granuloma of the vermillion border of the lip.



B Ameloblastoma of the anterior mandible obliterating the sulcus

Management

Many lesions can look similar and often a biopsy is needed. Many biopsies can be performed under local anaesthesia in the clinical setting easily since all OMS are skilled in local anaesthesia and the consultation rooms are fully equipped for surgical procedures.

Treatment can also be rendered in the operating theatre as indicated and may involve complete excision of the lesion or modified for more conservative measures, depending on the understanding of the nature of the lesion. The outcome is more holistic since the OMS understands how to plan for replacement of teeth, bone and soft tissue.



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Dr Tang is a paediatric dentist who practises in the Dental Centre of the National University Hospital. She provides dental treatment for children and adolescents. Aside from clinical work, she teaches the dental undergraduates and postgraduates in the university as a part-time clinical instructor. Her main areas of interest are in dental traumatology and treatment of the medically-compromised patients.

Dental Trauma in Children

One common dental condition that frequently presents in the primary setting is dental trauma. Primary teeth trauma can be distressing to both the child and the parents. Occasionally, trauma to the primary tooth may have effects on the permanent successor such as disturbance in the eruption or enamel hypoplasia.

Dental trauma to the young permanent tooth can present complications at a later stage due to the growth of the dentoalveolar complex in children. Overtime, the traumatised young permanent tooth may devitalise, get infected or exhibit infraocclusion at an early stage. Regular monitoring and timely intervention of these traumatised teeth are important to prevent worsening of the complications.

Management of Complications to the Young Permanent Tooth

Complex procedures such as surgical exposure, orthodontics, decoronation, root canal treatment and temporary prosthesis are some of the treatment which may be necessary to manage these complications during the child's growing years.

For poor prognosis traumatised anterior teeth, autotransplantation followed by orthodontics may be a feasible option from a biological point of view. These procedures can be very challenging for the child and therefore, proper communication between the dental team and the child's family is critical. A dedicated dental team and parental support would enable the child to overcome treatment anxieties better.

Paediatric Dental Services in NUH

The paediatric dental team in NUH focuses on providing dental care for all children from infancy to adolescence. For the anxious and fearful patients, inhalation sedation and general anaesthetic services are provided to deliver dental care to them more comfortably.

We adopt a multidisciplinary approach with other fellow dental specialists to manage more complex cases. We also work with our medical colleagues to provide dental support for children who develop oral manifestation from their medical condition. We aim to further enhance our services and facilities when we move to the National University Centre for Oral Health in 2019.

Autotransplantation for Poor Prognosis Traumatized Anterior Teeth



Left pic : The radiograph shows signs of resorption on the lateral sides of the root surface (red arrows) of a tooth that had delayed replantation following an avulsion from an accident.

Right pic : This poor prognosis tooth was subsequently extracted and replaced with the patient's own premolar tooth. Splinting was done to secure the premolar tooth in place.



Two weeks later, the splint was removed and the premolar was reshaped with tooth-coloured restorative material to resemble a front tooth. The patient has been planned for orthodontics to align the overall dentition. Autotransplantation is deemed a good alternative for tooth replacement as it is a more biological approach.



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Clinical Highlights

Orofacial Pain and Temporomandibular Joint Disorders (TMJD)



Orofacial Pain, pain located in the region above the neck, in front of the ears and below the hairline, as well as within the oral cavity; commonly originates from either dental or intra-oral pathologies or from temporomandibular joint injured tissues. Orofacial Pain can range from an ulcer in the mouth to pain from cranial nerve damage (trigeminal or other main nerve trunks in the head).

TMJ disorders are a group of conditions that cause pain in and around the jaw joint and nearby muscles. Jaw problems arising from the TMJ and surrounding structures can affect a person's ability to speak, eat, chew, swallow, and even breathe. There are other painful conditions in the oral cavity and on the face that can appear to be like toothaches and jaw or TMJ pain.

What is the Pain from Dental Origin?

There are two main sources of pain of dental origin: pulpal or periodontal. Pulpal pain referring to pain from 'within' the teeth. The pulp contains the blood vessels, neural and connective tissue inside the teeth.

Periodontal pain originates from the periodontal ligament - the fibrous tissue structure, with neural and vascular components, that joins the cementum covering the root to the alveolar bone. Toothache is any pain perceived in the teeth and their supporting structures (i.e. the periodontal ligament or mucosa). Dental pain / toothache is managed by identifying and treating to the cause or aetiology of the pain.

What are the symptoms of TMJ Disorders?

Pain is the most common symptom; however, some people may have no pain but still have problems using their jaws.

Symptoms can include:

- Pain around the face, jaw joint and nearby areas, including in the ear
- Swelling on the side of the face, including the ear
- Joint noises: clicking, popping or grating
- Locking of the jaw when attempting to open the mouth
- Headaches
- Bite that is uncomfortable, or feels "off"
- Neck, shoulder, and back pain

Other possible symptoms include: ringing in the ears, earaches, decreased hearing, dizziness, and vision problems.

How are Orofacial Pain and TMJ Disorders Diagnosed and Treated?

Diagnosis is important for the appropriate management of orofacial pain and TMJ disorders. Dentist who is specialised in pain management will be able to carry out a thorough dental and head and neck examination, which will help to diagnose orofacial or TMJ pain. The management of dental pain can be performed by the general dentist or the relevant specialist in that particular field.

The treatment of TMD should be conservative and reversible whenever possible and should not result in permanent changes to the jaw or teeth; they include medications, oral appliances, trigger point injections, physical and cognitive behavioural therapy. In some cases, surgical procedures examples, arthroscopy, arthrocentesis or joint replacement are required.

Chronification of Orofacial Pain and TMJ Disorders' Pain can be prevented with early diagnoses and management. That will ensure that the burden of chronic pain to the sufferer and society is kept to the lowest possible level.

You can refer your patient to the Orofacial Pain Clinic at NUH for consultation and management.

Article by: Dr Tan Hee Hon, Senior Consultant and Dr Joao Nuno Andrade Requiça Ferreira, Senior Registrar University Dental Cluster

Referral steps:

If patient agrees to be seen at the NUH Orofacial Pain/TMD clinic, he/she can contact the dental centre 2 at 6772 5988 or email to dental_centre2@nuhs.edu.sg.



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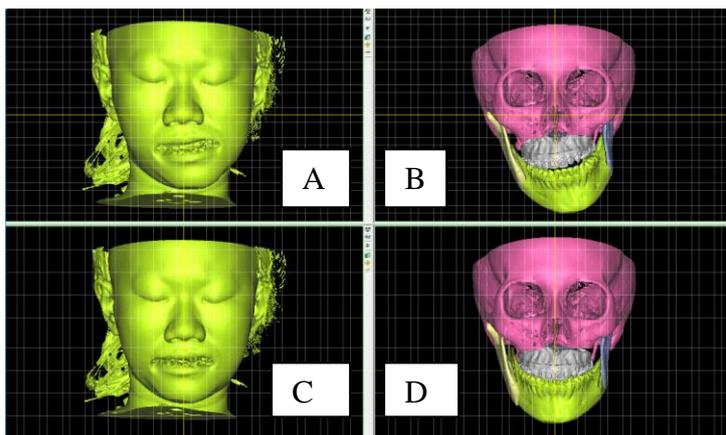
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Technology enhanced surgery in Oral and Maxillofacial Surgical Unit of University Dental Cluster

Orthognathic Surgery, the correction of dentofacial deformity is a common surgery performed by Oral and maxillofacial surgeon (OMS). Conventionally, the surgical planning is done with plaster casts/models made from impressions taken from patients, which is very labour intensive. With the advent of computer scanning, 3D imaging and virtual surgical planning, the use of technology to assist in surgical planning; especially for complex cases has gained popularity in the field of oral and maxillofacial surgery.

The following is a case to illustrate how OMS from University Dental Cluster embraced the use of technology to assist in the surgical planning.



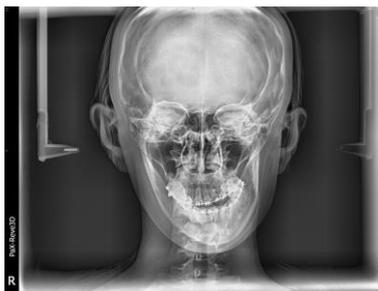
Virtual Planning

A: 3D image taken before surgery

B: Image constructed from scan taken before surgery

C: 3D image simulating after surgery

D: Jaw bone position after virtual surgery done



Radiograph : Before Surgery



Before Surgery



After Surgery

Article by: A.Prof Asher Lim
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Volunteering Heart

Providing dental care, one resident at a time

Currently I volunteer in Bukit Batok Home for the Aged (BBHA), providing regular dental check-up and dental procedures such as scaling, extractions and denture fabrications for the residents of BBHA.

It all started back in 2012 when I attended the inaugural Nursing Home Dental Conference supported by Singapore Dental Health Foundation (SDHF). The conference was an eye-opener; there are many underprivileged individuals who do not have much access to the dental treatment.

Shortly after, I started volunteering in BBHA which is one of the many homes under "BDS" (Bringing Dental care to Singaporeans) project under the initiative of SDHF.

BBHA is a home for about 200 residents, many of them destitute with no or estranged next of kin. BBHA also served as a temporary home for many others who could work to eventually support themselves. Many residents, despite their circumstances, are positive and I always look forward meeting and enjoy interacting with them.

I grew up and studied in Bukit Batok in my secondary school days, and I remember visiting BBHA interacting with the residents back then. It gives me a great pleasure knowing that I could be of help to these residents with special set of skills and knowledge acquired through dentistry.

Throughout the years, I appreciate the warm welcome and helps rendered by the nurses of BBHA, faith dental laboratory for making dentures free of charge and my fellow dentists helping alongside caring for the residents. A big thank you to all for making the lives of residents better!

Article by: Dr. ODE Wataru
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