Maxillofacial Deformity Correction & Reconstruction

A hub of accurate and safe maxillofacial deformity correction and reconstruction

By applying cutting-edge 3D technology, SMC performs a precise and specialized procedure to achieve the best results.
Maxillofacial Deformity Treatment

What is a maxillofacial deformity?
Maxillofacial deformities are irregularities associated with skull and facial skeletal misalignments caused by congenital or acquired conditions.

How to treat a maxillofacial deformity?
Orthognathic surgery (corrective jaw surgery) is performed to correct various facial skeletal irregularities. The common process goes through pre-surgical orthodontic correction → surgery → post-surgery orthodontic correction, but recently, with more accurate post-treatment prediction enabled by CT and 3-D assisted simulations, early surgery or a surgery-first method can be applied in some cases without pre-surgical orthodontic treatment.

Jaw function and occlusion are important factors to consider in treating a maxillofacial deformity, so functional evaluation of the temporomandibular joint (jaw joint), or TMJ, is essential. A patient with facial asymmetry, which involves severe joint damage, needs TMJ reconstructive and corrective surgeries at the same time.

At SMC, we apply 3-D technology throughout the entire process of a TMJ corrective surgery. By predicting what will happen during the actual surgery based on a 3-D simulation, we can shorten the surgical time and develop an optimal plan for the surgery. In case of partial loss in the mandible (lower jaw) or the maxilla (upper jaw) caused by the maxillofacial tumor or trauma, we can pinpoint a bone graft location with the
How to apply state-of-the-art tools such as navigations, 3-D surgical guides, and 3-D scanners?

For TMJ reconstruction, the location to fix the joint must be confirmed through CT before the surgery. At SMC, we use digital models to plan surgery and predict post-surgical dental movement and simulate surgery on a 3-D model.

Maxillofacial Reconstruction

For a defect caused by maxillofacial trauma or tumor, tissue grafting is an option which can reconstruct the jaw bone and tissues. The shape and the function of the jaw bone can be reconstructed through microvascular flap grafting using the fibular bone in the leg or the iliac bone.

Maxilla (upper jaw) reconstruction

Mandible (lower jaw) reconstruction

Procedures for TMJ/Jaw corrective and reconstructive surgery

<table>
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<tr>
<th>Consultation</th>
<th>Surgery prep</th>
<th>Pre-surgery consultation</th>
<th>Hospitalization &amp; Surgery</th>
<th>Discharge &amp; Follow-up consultation</th>
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<tr>
<td>- Diagnose&lt;br&gt;- Discuss surgical need&lt;br&gt;- Additional tests if necessary&lt;br&gt;- Schedule surgical date</td>
<td>- 3D computer simulation</td>
<td>- Consult on detailed surgical plan&lt;br&gt;- Obtain consent for surgery</td>
<td>- Orthognathic/TMJ surgery: 5-7 days&lt;br&gt;- Maxillofacial reconstructive surgery: 2-3 weeks</td>
<td>- Follow up for 1-2 months until stabilization</td>
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*The treatment process and the required time may vary depending on the patient's condition, and pre-/post-surgery correction or other additional treatments may be necessary.*
Best Professors in Maxillofacial Deformity Correction & Reconstruction

Chang Soo Kim D.D.S., Ph.D.
Oral and Maxillofacial Surgeon
Areas of Expertise:
- Orthognathic Surgery
- Implant Dentistry
- Maxillofacial Trauma
- Surgical Extraction

Jun Young Paeng D.D.S., Ph.D.
Oral and Maxillofacial Surgeon
Areas of Expertise:
- Maxillofacial Reconstruction
- Orthognathic Surgery
- TMD Surgery
- Maxillofacial Implant

Jae Myung Ahn D.D.S., Ph.D.
Oral and Maxillofacial Surgeon
Areas of Expertise:
- Implant Dentistry
- Maxillofacial Trauma
- Orthognathic Surgery
- Maxillofacial Reconstruction

Hae Won Choi D.D.S., Ph.D.
Orthodontist
Areas of Expertise:
- Surgical Orthodontics
- Esthetic Orthodontics
- Invisible Orthodontics
- Growth Modification & Dentofacial Orthopedics

Dentistry at SMC

The department of Dentistry at SMC provides a full range of dental care services.

* Sub-divisions of Dentistry at SMC

Oral and Maxillofacial Surgery  Orthodontics  Conservative Dentistry  Prosthodontics  Pediatric dentistry  Periodontics

The dentistry at SMC is equipped with a CT room, an X-ray room, an implant operating room and other state-of-the-art facilities. Every doctor’s office is designed for single-patient occupancy, which ensures no interruptions and a quiet environment in which the doctor concentrates only on the treatment of the patient.

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