is comparable to asthma. Understanding the modalities used in the diagnosis and treatment of OSA will facilitate informed decisions in patient management. This is especially important when considering that OSA is underdiagnosed and the potential long-term complications (eg, daytime hypersomnolence, hypertension, automobile and work-related accidents). The etiology of OSA in adults has been elucidated to result from upper airway closure and resistance. The determinants of altered airway resistance in adults include anatomical or static factors and physiologic or dynamic factors.

Cephalometric radiographs have been the most widely used imaging modality to study patients who have OSA. Cephalometric imaging is used to identify potential sites of upper airway obstruction using specific soft tissue (eg, reduced posterior airway space, long soft palate) and skeletal (eg, inferiorly positioned hyoid bone, micrognathia, reduced maxillary and mandibular projection) craniofacial dimensions. A cephalometric radiograph with the patients protruding their mandible may provide treatment planning information for changes in the posterior airway space and hyoid position. Cephalometry has several advantages, including reproducibility, low cost, easy access, minimal radiation exposure, and is noninvasive. The limitations of this technique include lack of correlation between skeletal cephalometric findings and severity of OSA, 2-dimensional imaging, poor correlation to surgical efficacy, and dynamic changes in the airway when comparing awake and upright with sleeping and supine patients. Frontal cephalogmetric imaging may provide additional information about the transverse dimensions of the velopharynx. Other diagnostic tests that appear promising to dynamically evaluate upper airway resistance during sleep include MRI, acoustic rhinometry, acoustic reflectometry, optical coherence tomography, pressure catheter-manometry, and the combining cephalometry and the Mueller Maneuver.

The oral and maxillofacial surgeon is uniquely qualified to diagnose and treat patients with OSA and future advances that accurately identify dynamic changes along the upper airway obstruction will facilitate improved treatment strategies.

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# Mandibular Reconstruction–The Potpourri of Available Techniques

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Mandibular reconstruction is a common clinical procedure practiced by several surgical disciplines to afford the restoration of osseous tissue, lost or destroyed by trauma, infectious and oncologic ablation, or is developmentally absent, or subjected to atrophy. Presently, autogenous bone of some type is the most common and successful graft system available. Techniques of reconstruction have and are continuously evolving, thus affording a variety of treatment options suitable to the specific needs of the different clinical circumstance that may be encountered.

This clinic will provide a systematic approach to mandibular reconstruction based on a historical perspective of its evolution, clinical experience and evidence based medicine. The place for primary and secondary reconstruction will be reviewed and the various techniques of alloplastic, free non vascularized autogenous bone grafts (block, particulate marrow), composite and free microvascular grafts will be presented. As well the use of resorbable meshes and morphogenic proteins will be exemplified and discussed.

In the era of bioresorbables, 3-D imaging with model prototyping and tissue engineering traditional techniques have improved in their accuracy and efficiency and we may well be approaching a millennium of conventional graft procurement obsolescence.

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## How to Make a Chair-Side Immediate Screw-Retained Provisional Crown

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Maintaining proper gingival architectures in the maxillary esthetic zone can be a challenging task when a tooth is to be removed and the implant placement is planned. While a removable treatment partial denture with a properly contoured ovate pontic can mitigate some of the pitfalls, patients often raise objections to having to wear a removable prosthesis. Such a concern can create additional barrier to accepting implant treatment options. Even when the implant can be placed immediately following the extraction, it is difficult to refer these patients back to the referring dentists on the same day for the fabrication of immediate fixed provisionals, as these immediate "emergency implant" patients can place tremendous burden on their daily sched-