

치료는 시험적인 면도 있고 주의해야 할 사항도 있다. Space management시 어떻게 하면 좀더 기능적이고 심미적인 방법으로 할 것인지 그 방법과 예를 교차해 보고자 한다.

OP-08 구연

The understanding and the matters of consequence of the digital cephalometric radiography (디지털 두부방사선계측사진에 대한 이해 및 고려사항)

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디지털 방사선사진 기술은 방사선 노출 감소, 빠른 영상 처리, 영상강화 기법의 적용, 자료의 보관 및 전송의 용이성, 화학약품을 사용하지 않는 친환경적 요소 등 많은 장점으로 인해 진단방사선 분야에서 기존의 필름 사진을 빠르게 대체하고 있다. 치과교정학 분야에서 사용하는 두부방사선계측사진 및 파노라마 사진에도 디지털 방사선사진 기술이 도입되어 이용되고 있으며, 점차 대중화되고 있는 추세이다. 현재 사용되는 두부방사선계측사진 촬영기에 이용되고 있는 디지털방사선 기술은, 필름을 대응하여 image plate를 이용하는 CR (computed radiography) 방식과, 중간 매개체 없이 직접 영상을 획득하는 DR (digital radiography) 방식으로 광범위하게 분류할 수 있으며, DR 방식은 인체를 투과한 방사선으로부터 가시적인 영상을 얻기까지의 기법에 따라 one shot record 방식과 slit beam scan 방식 등 세부적으로 다시 나뉘지게 된다. 이들은 서로 다른 고유한 장단점을 지니고 있으며, 디지털 방사선 사진 기술에 대한 기본적인 이해를 통해 적절한 기기의 선택과 활용에 도움을 얻을 수 있다. 이에, 본 연자는 교정의사의 관점에서 쉽게 이해할 수 있는 디지털 두부방사선계측사진 촬영기에 이용되는 최신 기술에 대한 내용과 각각의 장단점, 기기 선택과 사용에 있어서의 고려 사항 및 디지털 방사선 영상을 보다 잘 활용하기 위한 방법, 두부방사선계측사진의 디지털화로 인한 문제점 및 해결 방안, 미래의 발전 방향 등에 대하여 발표하고자 한다.

OP-09 구연

A problem-oriented therapeutic system integrated with orthodontic occlusal reconstruction for temporomandibular joint disorders

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There has been much controversy about the association between orthodontic treatment and temporomandibular joint disorder (TMD). In order to explore scientific evidences for establishing a strategy for TMD treatment integrated with orthodontic occlusal reconstruction, we have been conducting a series of studies with biomechanical, histological and biochemical approaches. In this presentation, differential diagnosis for TMD, available for orthodontists, will first be explained with a special reference to the diagnostic accuracy. Then, a newly developed evidence-based and problem-oriented therapeutic system for TMD is introduced, showing a couple of cases with various pathologic stages of TMJ internal derangement. The first case was a 34-year-old female with mild TMJ internal derangement. Anterior repositioning splint was used and then occlusal reconstruction was performed by use of multi-bracket appliances. The next case was a 21-year-old female with severe TMJ internal derangement or osteoarthritis (OA). TMJ pain and difficulty in mouth opening were relieved by manipulation to the TMJs and splint therapy, however, disk repositioning was not included in the treatment. Orthodontic tooth alignment was performed by use of multi-loop edgewise archwire. Stable occlusion was achieved with optimal condylar position and repair of condylar resorption in the first and second cases, respectively. Thus, it is emphasized that problem-oriented

therapeutic system should be established according to the intra-articular pathologic status and executed appropriately with orthodontic approaches to produce stable occlusion at splint-induced condylar position, which is speculated to produce optimal intra-articular environment leading to functional remodeling of the condyle with bone resorption regarded as TMJ-OA.

OP-10 구연

Effect of high-pull headgear and Class III elastics on non-surgical treatment for adult open bite

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Orthodontists are often faced with various types of an anterior open bite in adults. If an open bite case shows neither severe skeletal problems nor remarkably imbalanced facial profile, we'll try to treat them without surgery. The morphological indications of an anterior open bite include a steep mandibular plane and increased anterior facial height, both of which reflect mainly downward and backward rotation of the mandible. In some cases, an anterior open bite can be also attributed to excessive proclination of the dental arch with mesial inclination of the posterior teeth. Therefore, we have to make an effort not to cause mandibular further rotation and molar extrusion while active treatment. High-pull headgear to the upper molars may be one of the best approaches to improve an anterior open bite without remarkable extrusion of the upper molars. Class III intermaxillary elastics combined with high-pull headgear are also helpful in uprighting the lower molars and in correcting the lower occlusal plane. In this presentation, I'm going to introduce two open bite cases non-surgically treated by the standard edgewise appliance along with high-pull headgear and Class III elastics, and to describe the effect of this mechanics on non-surgical treatment of open bite. Case 1 : 19 years and 1 month old female showing slight skeletal Class II open bite but Angle Class III dental relationship. Case 2 : 20 years and 4 months old female showing severe skeletal Class II open bite without increased lower facial height.

OP-11 구연

Orthopedic versus surgically assisted maxillary expansion – Which cases & when? (악정형력에 의한 상악골 확장과 외과적 술식을 동반한 상악골 확장 – 어떤 경우에 언제?)

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The envelope of change in the transverse dimension is significant in the growing patient where orthopedic expansion can be done. In the non-growing patient, mild alveolar bone remodeling can accomplish half of that change. Beyond that, surgery is needed for correction of deficient maxillary arch width. Two different techniques, multi-segmented maxillary surgery or surgically assisted rapid maxillary expansion (RME), can be used for surgical palatal expansion. If surgery is needed, I prefer surgically assisted RME, which I feel is more stable. To support this portion, I like to cite an article by Dr. Proffit at UNC published in 1996 in International Journal of Adult Orthodontics and Orthognathic Surgery. In this study, the most stable maxillary surgery was a maxillary impaction, and the least was a segmental upper jaw used to widen the maxilla. Indications for surgically assisted RME are