

## 16th International Conference on Modern Dental Health & Treatment, September 21-22, 2018, Philadelphia, USA-Genetic association study between vitamin d receptor gene and temporomandibular disorders Ayça

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**Aim:** Temporomandibular joint internal derangement (TMJ-ID) is the imbalance of metabolic processes in the extracellular matrix (ECM) of the articular disc, which progressively degrades causing tissue breakdown. The Vitamin D receptor (VDR) gene polymorphisms have been investigated for their potential effects and functional significance on several pathological conditions particularly osteoarthritis (OA) and disc degeneration-linked pathologies. The aim of this study was to investigate the possible association of Fok1, Apa1 and Taq1 polymorphisms of VDR gene with TMJ-ID. **Materials and Methods:** The study included 49 unrelated TMJ-ID patients ( $31.7 \pm 7.9$ ) and 70 healthy controls ( $28.22 \pm 5.9$ ) without TMJ-ID. Additionally, TMJ-ID patients were evaluated as anterior disc displacement with reduction (ADDWR) (n=24) and anterior disc displacement without reduction (ADDWOR) (n=25). Blood samples were obtained and DNA was extracted by standard proteinase K/phenol-chloroform method. Fok1, Apa1 and Taq1 polymorphisms of VDR gene were investigated by a polymerase chain reaction (PCR) based restriction fragment length polymorphism (RFLP). **Results:** The genotype and allele frequency distributions of Fok1/rs2228570 (C>T), Taq1/rs731236 (T>C) and Apa1/rs7975232 (A>C) did not show significant differences in TMJ-ID patients compared to the healthy group. In Fok1, carrying the TT genotype was almost 2 fold risk factor in TMJ-ID, ADDWR and ADDWOR patients compared to the healthy group (OR=1.72, OR=1.55, OR= 1.93 respectively) although not significant. In ADDWR, CT genotype was significantly different than CC genotype (OR=0.35, CI:0.12-1.02,  $p<0.05$ ) as a pro-

TECTIVE factor. In Apa1, carrying the AC and CC genotype was almost 1.23-1.79 fold risk factor in TMJID patients, in ADDWR and ADDWOR cases compared to the healthy group although not significant. There were no significant results in none of the groups in Taq1 polymorphism. **Conclusion:** Our results suggest that Fok1 and Apa1 polymorphisms may be associated with TMJ-ID pathogenesis. Increasing the case and controls numbers is needed to further evaluate the genotype and allelic frequencies and risk factor ratios of VDR polymorphisms in TMJ-ID.

The purpose of the study was to assess clinically and radiographically the hard and soft tissue responses and aesthetic outcome after grafting the horizontal gap distance in immediately placed non-submerged single implants. Fourteen implants were placed in 11 patients with a tooth in the maxillary anterior aesthetic zone scheduled for replacement with an immediate implant who had at least one adjacent tooth were included in the study. Seven implants were placed in the study group (A) in which the horizontal gaps were grafted with Anorganic Bovine Bone, and 7 implants were placed in the control group (B) without the addition of Anorganic Bovine Bone. Healing abutments were connected to implants in both groups. At 6 months period second stage procedure ensued by taking impressions and fabrications of the definitive restoration. CBCT scans were taken prior to teeth extraction to measure the thickness of the LBP, immediately post-implant placement to measure the size of the HG and at 1 year follow up period to measure the amount of alteration the thickness of LBP. GB was assessed before extraction and at 1

year follow up period and PES values were taken two months post-loading of the implants. In recent years, several techniques have been improved or emerged to promote, within Dentistry, the orofacial harmonization. Among this technique, we can mention the use of phototherapy associated with cosmetics, as activating agents of skin activity, the use of Hyaluronic Acid as filling biomaterial, the use of platelet rich fibrin (PRF) as inducer of neo collagen geneses and the use of polydioxanone wires (PDO WIRES) as tractor agents besides many others. The purpose of this presentation is to introduce a multidisciplinary approach that intends to potentiate the various techniques for a better result in the aesthetic treatment and skin rejuvenation. A method to achieve complete oral rehabilitation with predictable success is the applicable to oral rehabilitations with fixed prosthesis on teeth and/or implants. We use the fixed provisional restorations to determine the centric occlusion and dental morphology for an optimal functional outcome on a periodontal, phonetic and aesthetic level. We prepare every case of rehabilitation in a classical way, using die cast models, diagnostic wax up, CBCT scan, surgical guide and a thermoplastic mold of our wax up to achieve provisional methacrylate crowns made intra orally. To deprogram the masticatory muscles and finding the centric occlusion a Lucia Jig is then incorporated in the provisional crowns. After a minimal time of 10 minutes the centric position is located. Adding methacrylate posterior occlusal stability and lateral guidance is optimized, aesthetic and phonetic adaptations are made. If there are neither subjective nor objective problems the next weeks of follow up, we scan our provisional bridge. This virtual bridge then will be positioned on the virtual model and all the parameters controlled. Finally the technician makes the reduction on the virtual structure

for later ceramic covering and this design is sent to the zirconia milling machine. Achieving the occlusion in centric relation, reestablishing the TMJ in its physiological position makes us realize full arch rehabilitations with a very good long-term prognosis. Patients and Doctors commonly experience several clinical problems when using complete pre-generated aligners. Changes of the dental anatomy by restorations, prosthetics, fractures or even tooth loss may compromise the sequence of aligners. Poorly used or lost aligners by patients tend to delay and compromise treatment outcomes, demanding reposition trays. Often, the orthodontic treatment objectives and plan may change during treatment. In these situations aligners may be discarded and the treatment restarts. Some patients may experience severe pain with aligners. Relieving the pain along the treatment with pre-sets of aligners is very difficult. Severe cases may need refinement trays, therefore a new impression must be submitted and the treatment can only be continued after a long period of time. A new method was invented to manage and solve these problems. The big breakthrough is that, a new impression must be made every four months, allowing clinical procedures to be done along the orthodontic treatment. Two trays with different thickness induce dental movement through the month for each arch, in case of loss; a backup aligner is available in every stage. A four-month window of opportunity is open to change the treatment plan, average amount of tooth movement and incorporate any anatomic dental change. The refinement is done along the treatment, not at the end. Since 2008, this technique has been proving great clinical results, treating different malocclusions and giving a comfortable experience for patients.