Journal
Of
Minimum Intervention In Dentistry

- Short communication -

Minimally Invasive Treatment in Dentistry – A clinical case report

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This case is related to a 25 years old healthy female patient. Her past medical history excluded diabetes and hypertension. She was oriented to the dental office by our referral orthodontist to find a prosthetic replacement solution to the gap consequential to the orthodontic treatment. The open space of 3.5 mm was localized at the first lower right premolar.

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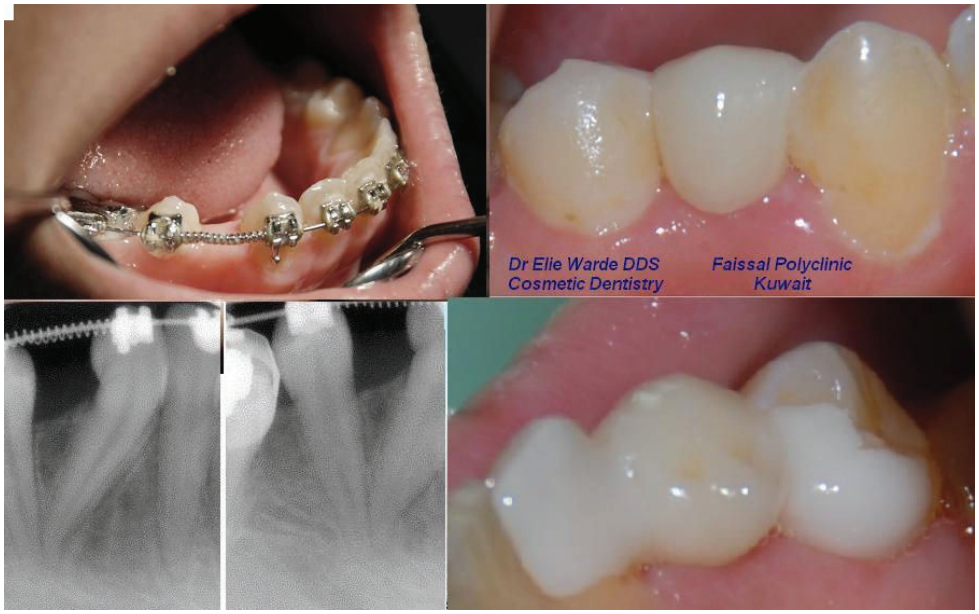
The parapical X-ray showed clearly that the apex of the lower right canine, 43, was ankylosed in a distal position, very close to the apex of the 2nd lower right premolar 45, maybe gemini apexes. The lower right canine 43 had the C shape showed on the X-ray An implant was contraindicated in this particular case.

Our concept of minimum intervention in dentistry motivated the following treatment: The best minimally invasive restoration suggested was a casted Maryland bridge "Emax Zir Ivoclar". The orthodontist removed the braces and the orthodontic wire only on the selected site from 43 to 46, to allow access for preparations and impressions. A local infiltration of Mepivacaine 2%, adrenaline 1/100k was injected at the mental foramina. Minimum invasive preparations were drilled on the lingual faces of the 1st lower right canine 43 and of the 2nd lower right premolar 45. The occlusal rest on the mesial marginal crest of the 45 had a depth of 1mm. 43 and 45 remained vital. The undercuts resulting from the remaining orthodontic wire were covered by a layer of orthodontic wax, to avoid tears in the impression paste. The gingival crest mucosa was thinned with the "Ezelase" to obtain a pontic with a natural emergence profile.

The impression was taken with a rubber A silicone "Affinis Coltene" putty-soft and light body using the one time impression technique.



The impression was disinfected in a gluteraldehyde solution, pouched and sent to the lab. The try-in of the Maryland bridge "Emax Zir Ivoclar" showed a perfect fitting and a precise adaptation to the margins. Occlusion was not corrected at this stage. The Maryland bridge was etched 60s with a 9% hydrofluoric acid, silaned 60s, covered by a thin layer of bonding "All Bond Kerr", and then light cured. The preparations were etched 30s with a 37% phosphoric acid and also covered by a thin layer of bonding "All Bond Kerr" then light cured. The lutting resin composite cement used was the dual cure syringe "NX3 Kerr" with mixing tip. After the total setting of the dual cure lutting resin composite cement, the margins were cleaned from excesses, polished and then the occlusion checked.

The choice of a Maryland bridge restoration, for this specific case, was an extreme challenge. The adhesive bonding resins from the 7th generation guarantee an excellent sealing without any post-op sensitivity.

Our major concern was to replace the missing lower right 1st premolar 44, with the minimally invasive procedure and the maximum esthetic and cosmetic results.

摘引

本案例与一位25岁的健康女性病人相关。其过去的医疗病史未发现糖尿病和高血压。
她是被与我们有联系的牙齿矫正师介绍而来，要为其牙齿矫正治疗所留下的缺口寻求一个弥补性的复原方案。
在右下侧第一前臼齿上定位了3.5mm的空缺。

Resumen

El presente caso se relaciona a una paciente sana de 25 años de edad. Su historia médica pasada excluye diabetes e hipertensión. Nuestro ortodoncista referente la dirigió a la oficina dental a fin de encontrar una solución de reemplazo prostético a la separación resultante del tratamiento ortodóntico. La separación de 3.5 mm se localizó en el primer premolar inferior derecho.