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MULTIPLE IMPLANT PLACEMENT ATTEMPT FAILURE DUE TO CANNABIS SMOKE INHALATION. A CASE STUDY

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- **Introduction:** As medicinal and recreational cannabis use broadens, knowledge of its effects on the implants has become more important to all dentists. Although the harmful effect of tobacco smoking on dental implants is well documented, the effect of Cannabis smoke has not been broadly investigated



Pic 1



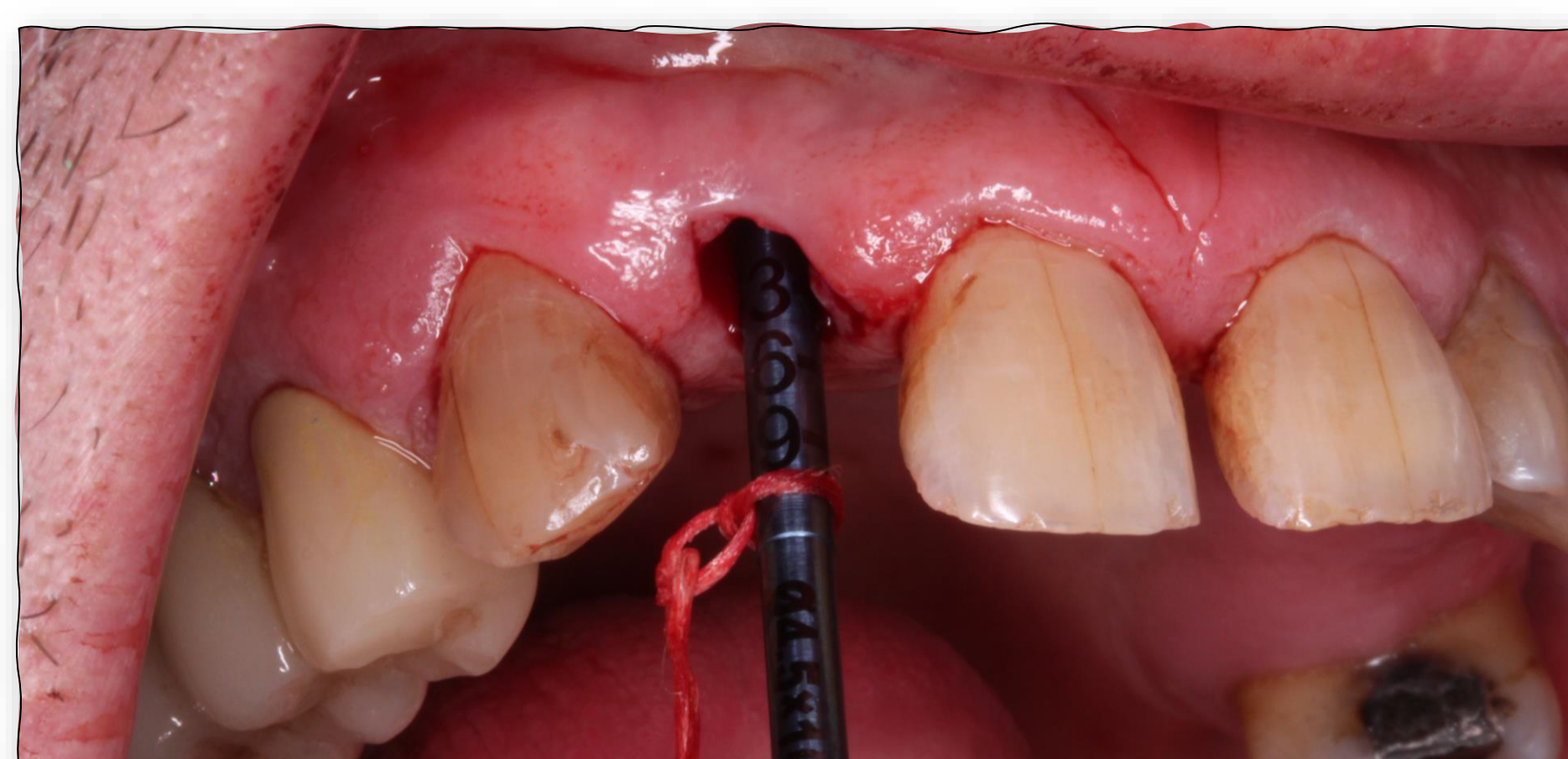
Pic 2

- **Case review:** A 64-year-old healthy male with a history of **smoking marijuana for the past 48 years** presented to clinic with the chief concern of non-restorable #7. (Pic 1,2). Patient did not inform the practitioner about his smoking habits.

- It was determined **that the extraction, immediate implant placement with immediate temporization** can be performed. Simple extraction of tooth #7 was done. Surgical protocol for the implant system followed and a 4.0/5.0 x 13 mm 12-degree Co-Axis implant was placed. A screw-retained temporary crown was fabricated and was placed out of occlusion. The patient was instructed to avoid pressure on the implant. (Pic 3,4,5)



Pic 3

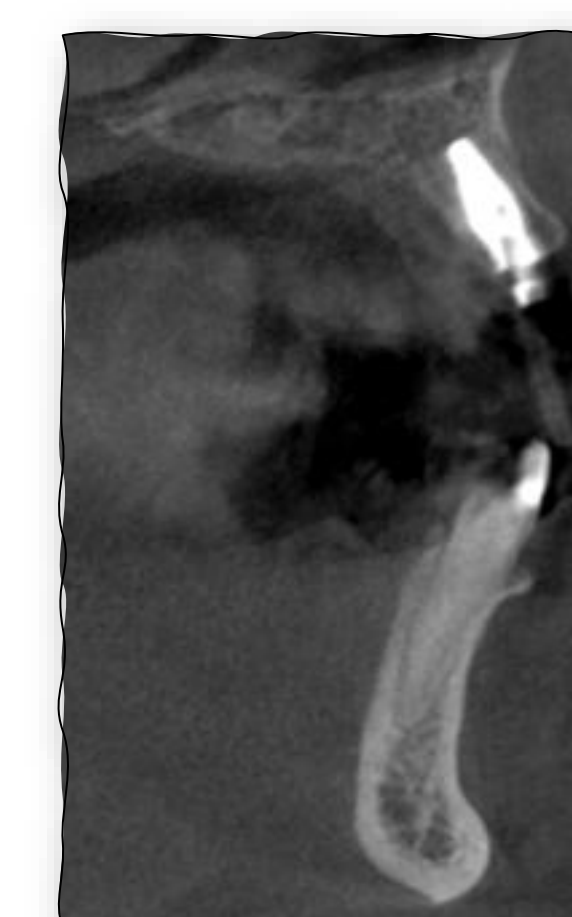


Pic 4



Pic 5

- **Five months later**, the patient presented with a loose temporary crown. Upon examination, it was noticed that the soft tissue around the implant is healthy, but the implant is rotating and has not integrated. CBCT showed no bone loss around the implant. Implant had failed and not integrated. (Pic 6,7,8)



Pic 6



Pic 7



Pic 8



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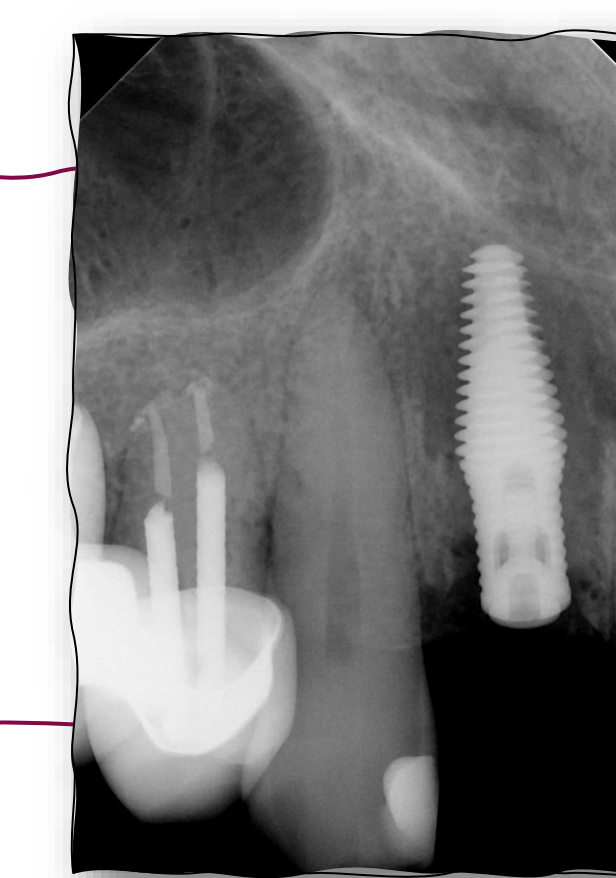
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- ▶ The failed implant was removed. Socket curetted and irrigated. A 3.5/4.5 x 15 mm 12-degree Co-Axis implant was placed and more than 40 Ncm torque was achieved. (Pic 9). No temporary crown was delivered, and the implant was buried.



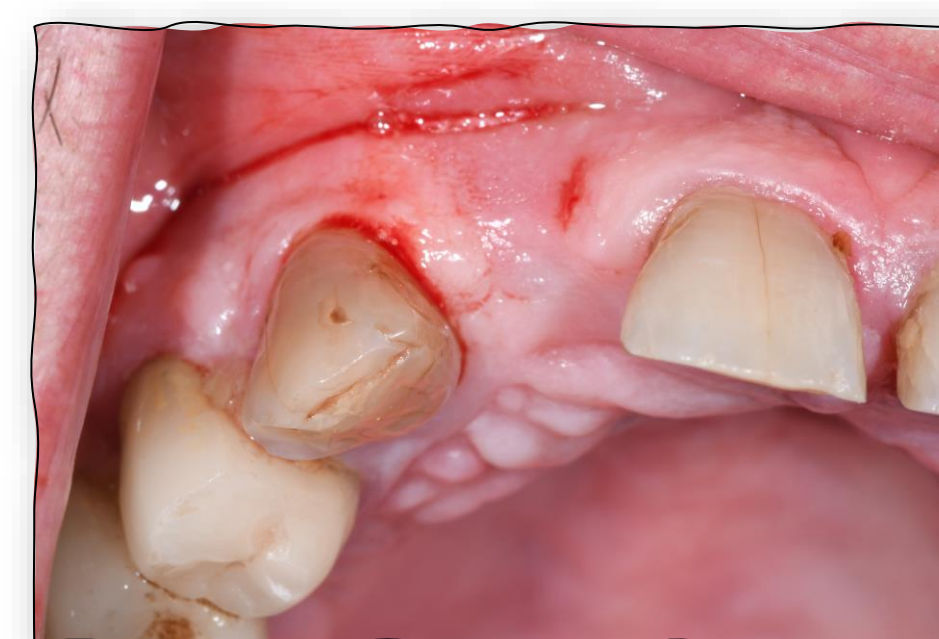
Pic 9

- ▶ 2 months follow up PA after 2nd implant attempt (Pic 10)



Pic 10

- ▶ The patient presented for uncover 5 months later and reported an abscess taste when pressing on the area. (Pic 11) CBCT revealed a large defect around the implant, which was completely mobile, encapsulated in fibrous tissue. Upon investigating the possible reason for implant failure, **he stated that he smokes weed all day, every day through a vape pen.**



Pic 11



Pic 12

- ▶ The implant was removed, socket debrided, and filled with 1.0 cc of freeze-dried bone allograft and Enamel matrix derivative (Emdogain) and covered with collaplug. (Pic 12)
- ▶ A week later patient developed swelling in the site preservation area and was prescribed amoxicillin for the infection. (Pic 13)



Pic 13

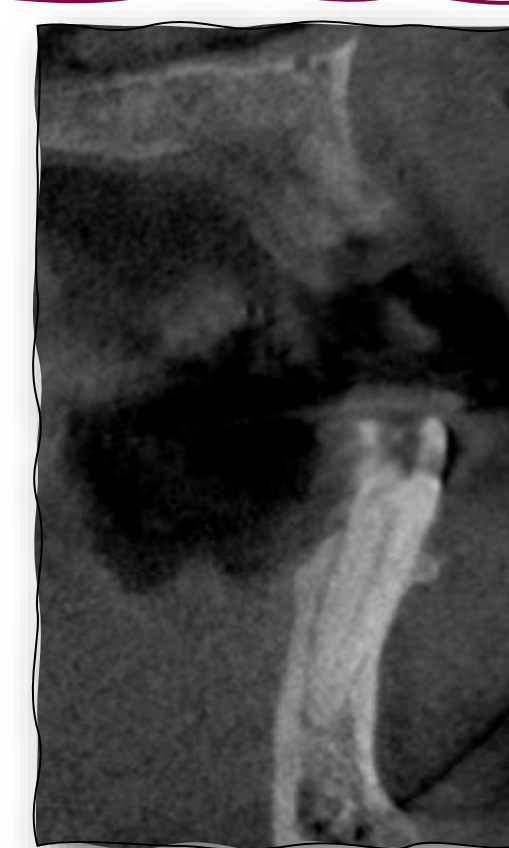


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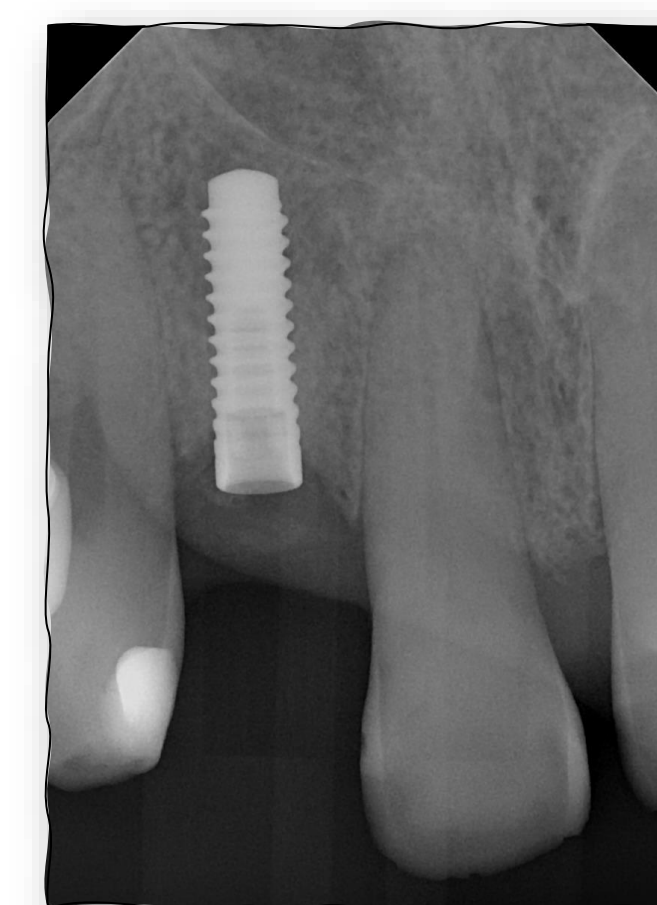
- **Seven months later**, a new 3.3 mm x 12mm implant from another system was placed and buried. (Pic 14,15) Uncovery was done 5 months later. 3rd implant was fully integrated with bone to implant level (Pic 16). The implant was temporized again to contour the gingival tissue around the implant.



Pic 14



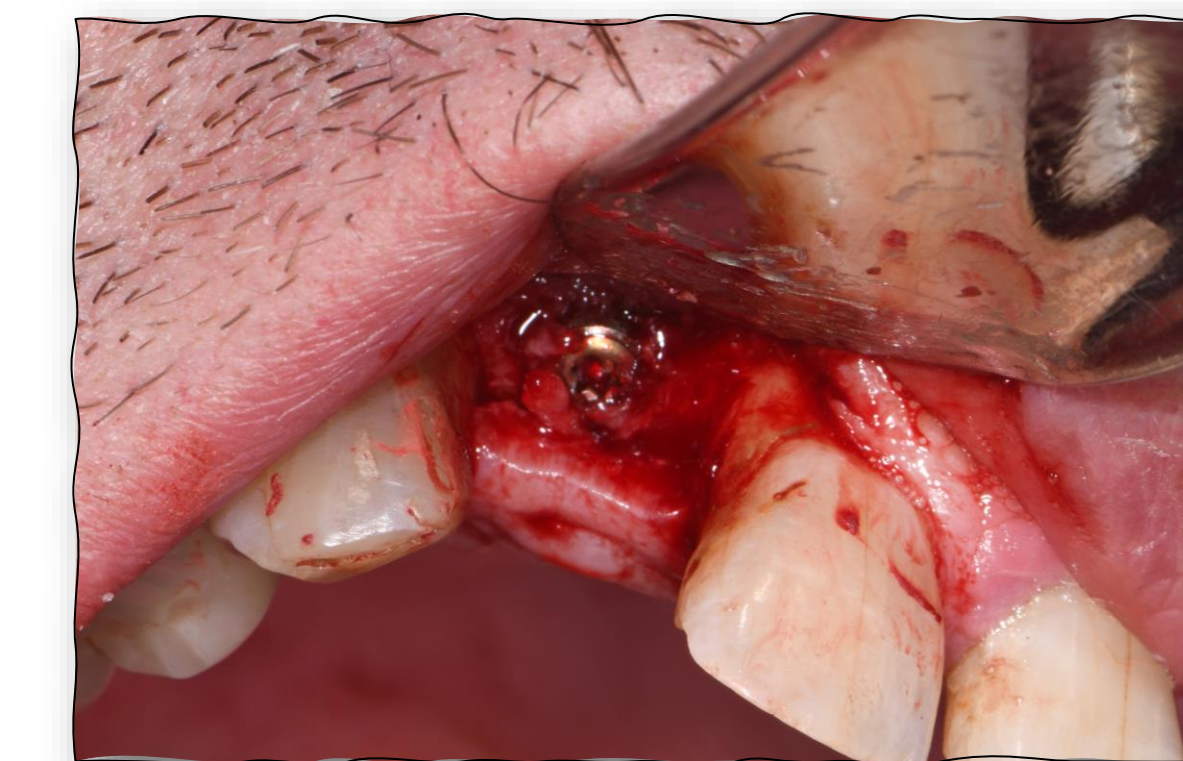
Pic 15



Pic 16



Pic 17



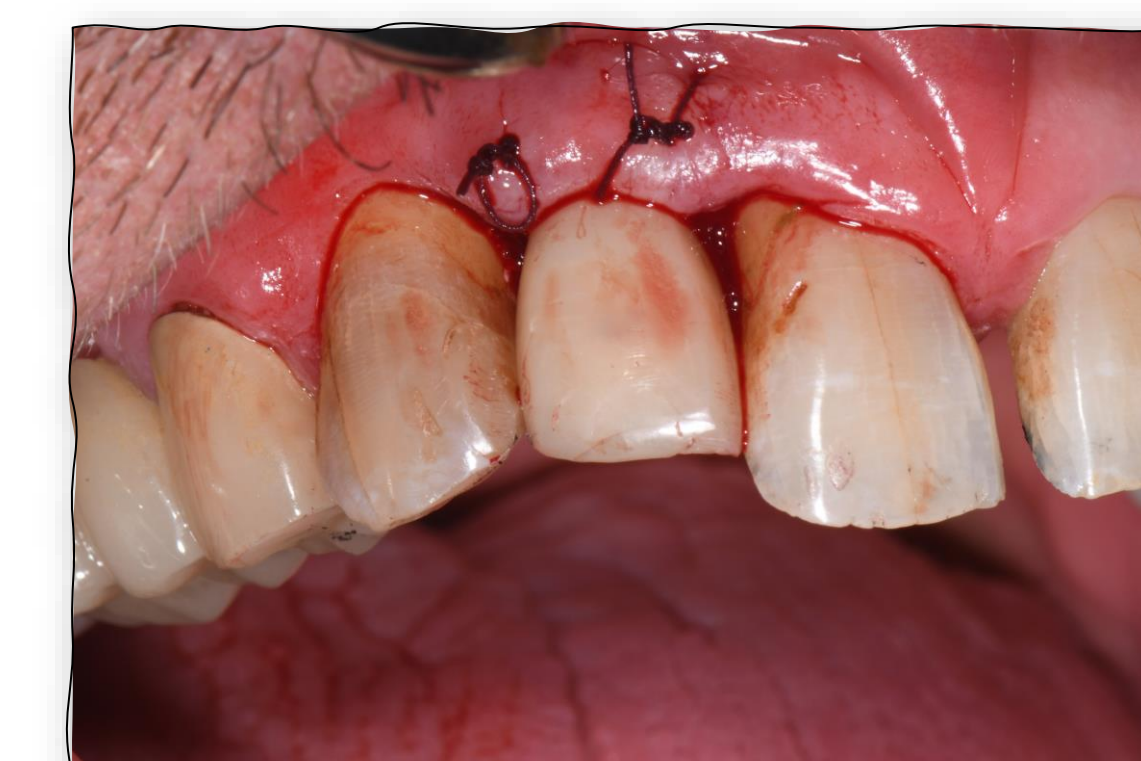
Pic 18



Pic 19



Pic 20



Pic 21



Pic 22

Patient reported that he is using a device (pic 22) to lead the smoke to his throat to avoid the direct smoke and heat touching the implant site which has seemed to help with initial integration of the implant.

- ▶ **Conclusion:** Vaping cannabis can be easily missed by dentists and patients in medical history questionnaire but still can have detrimental effects on implant osseointegration and healing.
- ▶ Two- stage implant placement is recommended when a patient has history of cannabis smoking.
- ▶ Long term prognosis of smoking cannabis is not widely studied, but potential negative effect of smoking on healing and the outcome of implant treatment has been well documented in research. (1)

