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Management of a mutilated orthodontic case through a multidisciplinary approach- a case report

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ABSTRACT

A female patient aged 35 years reported with mutilated occlusion with mid line shift, aggravation of skeletal Cl II with posterior cross bite on patient's right side. This was a case of Skeletal Class II Div 1 malocclusion which had been treated previously by other operator with extraction of all 1st premolars except in upper right quadrant. Multidisciplinary approach was taken to resolve all the problems as follows: mid line shift & cross bite were corrected by the orthodontist with application of "FORSUS: Fatigue Resistant Device", the odontome was eliminated by the oral surgeon, reconstruction of a premolar crown was done by the specialist in esthetic conservative dentistry & gingival grafting on a canine was done by the Periodontist. The objective of this presentation is to demonstrate the satisfactory outcome of the multidisciplinary approach in a mutiliated occlusion.[1,2]

1. Case report

A poorly treated case with mutilation by another operator could cause difficulty in retreatment especially where it is accompanied with a left over pathological lesion like an odontome, cysts or gingival disease. Such a situation may need a multidisciplinary approach.

A 32 yr old married lady reported to department of orthodontics dissatisfied of previous orthodontic treatment taken 5 yrs ago & after consulting two other orthodontists for retreatment over the period of last 10 months. She complained of bad bite, food lodgment in lower right canine tooth region with difficulty in chewing and sensitivity with respect to the same tooth. She feared that it would soon be lost. Medical history was non- significant except for familial high Blood pressure.

She gave a history of previous orthodontic treatment for correction of severe crowding & high labial canines but as per her description it terminated unsatisfactorily with persistent problem of gingival recession in lower right canine (43) region. She further informed that at the time of previous orthodontic treatment, treatment plan was finalized without any radiological & photographic investigations; therapeutic extractions were done without any explanation to the patient as to why 14 not in the plan of therapeutic extraction. She further described that during the extraction of 44, crown had broken off; the root piece was removed during a second procedure, on enquiring about it she was told the details about it as "open method with sacrifice of buccal cortical plate" by the second operator who specified the specialty as an oral surgeon. According to the patient 43 was hypersensitive all throughout the course of previous treatment & she used to feel the tingling sensation in that region. She said that at the end of the previous treatment all the extraction spaces were filled up, removable retention appliances were given. She confessed

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about her being non complaint during her previous treatment procedure owing to her busy teaching job schedule in a school. Recently she felt that the extraction spaces were reappearing & she was not satisfied with the outcome. She was in a state of confusion before considering retreatment.

1.1. *Clinical examination*

Hailing from the Southern part of India, her facial features were sharp with soft tissue thickness (nose, lips & chin) enough or little on excessive side to mask the underlying malocclusion.

Intra oral examination revealed missing 12, 24, 34, 44, 18, 28, 48 & 13 had been brought in its place at the end of previous orthodontic treatment. 14 & 15 were in buccal scissors bite with 43& 45. 13 showed excessive mesial inclination with a small rounded bony prominence felt mesial to its root prominence in vestibule.11 showed distopalatal rotation.25 showed Macrodontia with distopalatal rotation.38 was extruded behind distal margin of 27 and all lower anteriors showed tipping towards pt's left side with crowding.43 showed severe gingival recession with periodontal pocket of more than 4 mm. Molar relation was Angle's Cl II with both upper molars showing mesial inclination. Both canines were in Cl II relationship with 33 showing severe distal tipping. Midlines were off by 4 mm with lower mid line shifted to patient's left. Overjet was more on right side than the left. Overbite was deep (5 mm) (Fig. 1, 2, Table 1).

Functional analysis revealed that on closure from Centric Relation to Centric Occlusion there was deviation of lower jaw to patient's left side after initial contact. The case was diagnosed as Skeletal Cl II & dental Cl II Div 1 malocclusion with Cl II canines, 12 missing & an odontome in its place.

1.2. *Treatment plan*

At a joint clinic of Orthodontics, Oral sugery and Periodontics, following treatment plan was finalized to treat the case.

- ➢ Use of Fixed Orthodontic appliances of 022 slot of MBT prescription for leveling and aligning both arches.
- ➢ Surgical Removal of the odontome in between the roots of 11 & 13 & extraction of 38 (Fig. 3).
- ➢ Fatigue Resistant Device FORSUS for correction of CI II & mid line to be used after the complete leveling of arches &

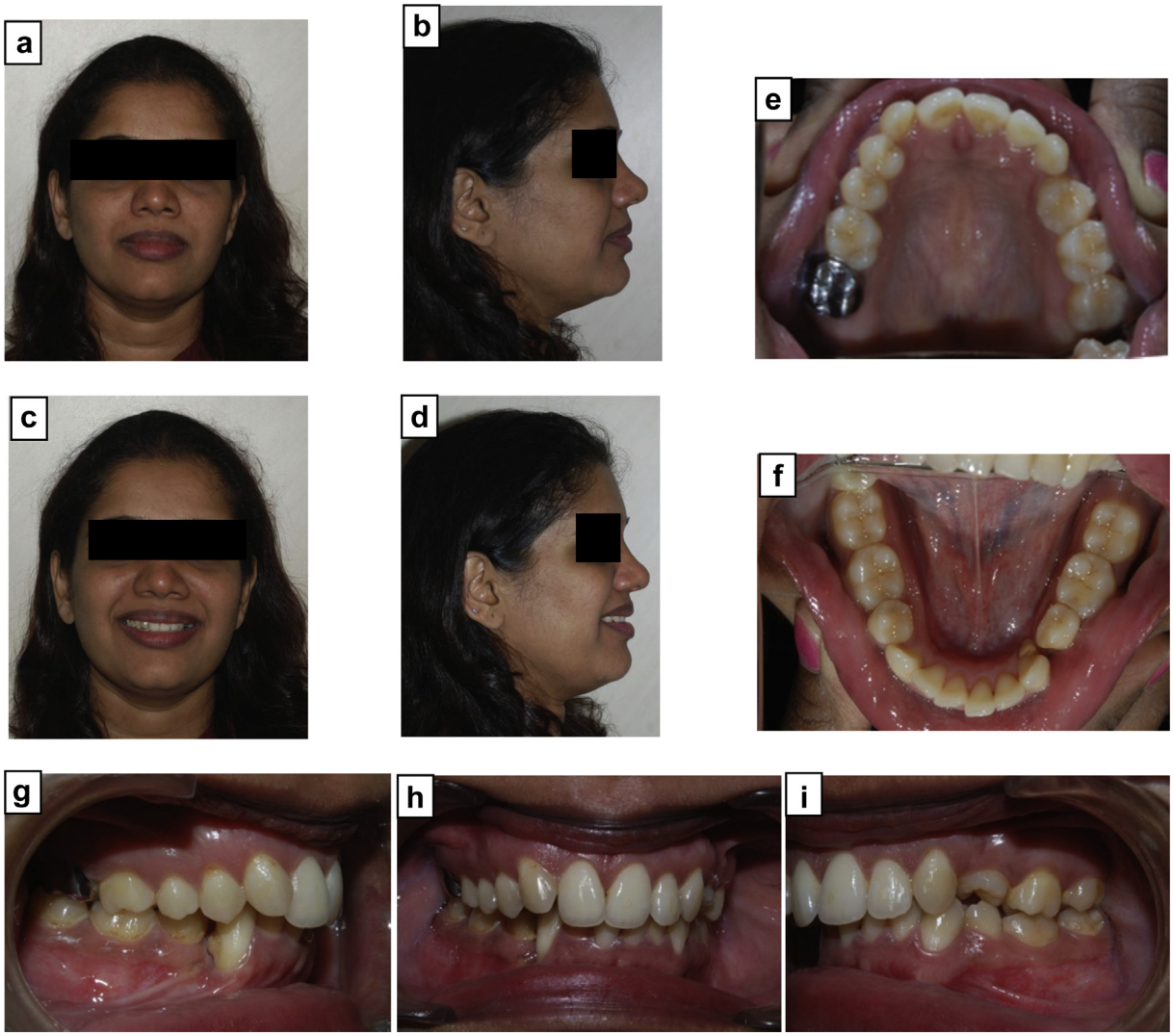

Fig. 1 – Pre Orthodontic treatment Intraoral & Extraoral photographs (a to f).