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RESEARCH ARTICLE

A CASE REPORT: A RARE COMMON TRANSMIGRATED KISSING MANDIBULAR CANINE

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Abstract

A significant amount of modern oral and maxillofacial surgery involves treating impacted canine. Bilateral impacted canine is a rare case.A 54-year-old male presented withhistory of pain and swelling in the lower front teeth region since last 3 monthwithin the jaw. Radiographic examination revealed a bilateral impacted canines in the centre area on lower jaw. Surgical removal of both canine were performed under local anaesthesia.The patient made an uneventful recovery with no postopera tive complications.This case report highlights the challenges of surgical removal of deeply impacted bilateral canine.

Introduction:-

One of the most frequent procedure that oral and maxillofacial surgeons undergo is the extraction of impacted canine. In order to forecast the length of the procedure and the patient's appointment time, it is crucial to assess the extraction's difficulty in the OPD. Furthermore, postoperative problems are known to be associated with the extraction difficulties and the pattern of the impacted canines. Canine impaction can result from a number of causes, such as an irregular tooth position, obstruction by adjacent teeth, or a lack of room in the dental arch. These classifications can help the surgeons to assesthe difficulty in removal of canine during procedure.A rare example of a surgically successful removal of a profoundly impacted canine is presented in this case report. The incidence for this phenomenon has been reported to be ranging from 0.8–3.6% to 0.1%. [2,3]. Kara et al. studied the prevalence of transmigration of various mandibular teeth and reported an incidence of 0.079% for mandibular canines, 0.0017% trans migrant lateral teeth and 0.0026% trans migrant premolars[5].

In order to ensure successful results, the case emphasizes the significance of meticulous preoperative planning, exact surgical techniqueMupparapu classified transmigrated mandibular canines into five types: [4]

Type 1: Canine impacted mesioangularly across the midline, labial, or lingual to the anterior teeth with crown portion of tooth crossing the midline.

Type 2: Canine horizontally impacted near the inferior border of the mandible below the apices of the incisors.

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Type 3: Canine erupted either mesial or distal to the opposite canine.
Type 4: Canine horizontally impacted near the inferior border of the mandible below the apices of the premolar or molar on the opposite side.
Type 5: Canine positioned vertically in the middle with the long axis of the tooth crossing the midline.
The incidence of these types varies with Type 1 (45.6%) being the most common, followed by Type 2 (20%), Type 4 (17%), Type 3 (14%), and Type 5 (1.5%).

Case Report:-
A 54 year old male patient attended the department of Oral and Maxillofacial Surgery of Dr R Ahmed Dental Collegeand Hospital, Kolkatawith complains of pain and swelling in the anterior teeth region of the lower jaw since last 3months. Patient had a history of hypertension and was on antihypertensive medication since last 3 years.On clinical examination,intraorally the crown of the impacted canines were present with no overlying soft changes.However there was tenderness on palpation over the said region.Patient was adviced for OPG along with routine haemogram and serological investigation. OPG revealed the bilateral impacted canines with and right sided caninetooth(43) crossing the midline almost in a horizontalposition and the left sided canine (33) was in vertical position with close proximity to apex of the 31,32,41,42 and 44 tooth. Some amount of pathological bone loss was present in the crown of 43 canine.All the parameters of haematological and serological investigation were found to be within normal limit and surgical removal of both the canines were doneunder local anaesthesia.Mucoperiostealfla p was reflected following crevicular incision from 34 tooth to44 tooth and vertical release incision was given with a broad base.Adequate amount of bone removal was carried out by using of bur and chisel.A point of application was created for straight WarwickJames elevator for removal.The 43 tooth was delivered followed by the 33 tooth. Soft tissue curettage with toileting of the wound and haemostasis was achieved. Suturing was done with 3-0 black silk. Post-operative wound healing was uneventful and sutures were removed after 7 days.

Fig:1pre Operative Photograph and fig:2after Removal Of Both Tooth

Fig:3right And Left Canines and fig:4 preOPG

Fig:5after Removal Of Canines

Fig:6 Post Operativefollow Up and fig:7 Post Op OPG

Discussion:-

Mandibular canine impaction is uncommon as compared to the maxillary canine.Canine transmigration requires significant consideration in dentistry regardinginterceptive, aesthetic, orthodontic and surgical concerns. Transmigrationusually involves a single mandibular canine with only 37 cases of bilateraltransmigration of mandibular canines reported so far [1,8]. However, transmigration is more commonly exhibited by mandibular canines.This can be attributed to the conical crown, the long root of canine and greater cross-sectional area of the symphysis. Transmigration is usually considered a rare phenomenon with a prevalence of only 0.31% and generally unilateral transmigration is seen [4].Bilaterally when transmigrated can exhibit kissing phenomenon in the radiograph [7]. The case reported here is similar to the kissing phenomenon described byVan Hoof, as the crowns of canines are contacting each other within a singlefollicular space with the roots pointing in the opposite directions [9].The etiology of transmigration is unknown. Different hypotheses for transmigration suggested in the literature

are abnormal displacement of the tooth bud or deviation during development, abnormal strong eruption force or a change which affects thecrypt of the tooth germ, premature loss of deciduous teeth, osteodentaldiscrepancy, endocrinopathy, hereditary factors, and trauma [8].

Various management and diagnostic options are present for decision making in such cases (Figure 8]. Management of transmigration mainly involves surgical extraction [1]. In asymptomatic patients with no pathological changes, surgical extraction can be deferred, and the patient can be put on periodic follow up [6]. In case of orthodontic treatment, erupted transmigrated canine should be extracted instead of the usual premolars to prevent excessive treatment time. Surgical exposure with orthodontic realignment can be attempted for the labially placed canine in non-extraction cases when the crown has not migrated past the adjacent lateral incisor [2].Management of transmigrated mandibular canines includes periodic observation, exposure and orthodontic alignment, transplantation, extraction. Transmigrated canines if detected early can be observed periodically over time to monitor their development and movement, which may improve prognosis and treatment as sometimes they can be preserved with orthodontic treatment and transplantation. Surgical extraction is the treatment of choice in patients with transmigrated canines

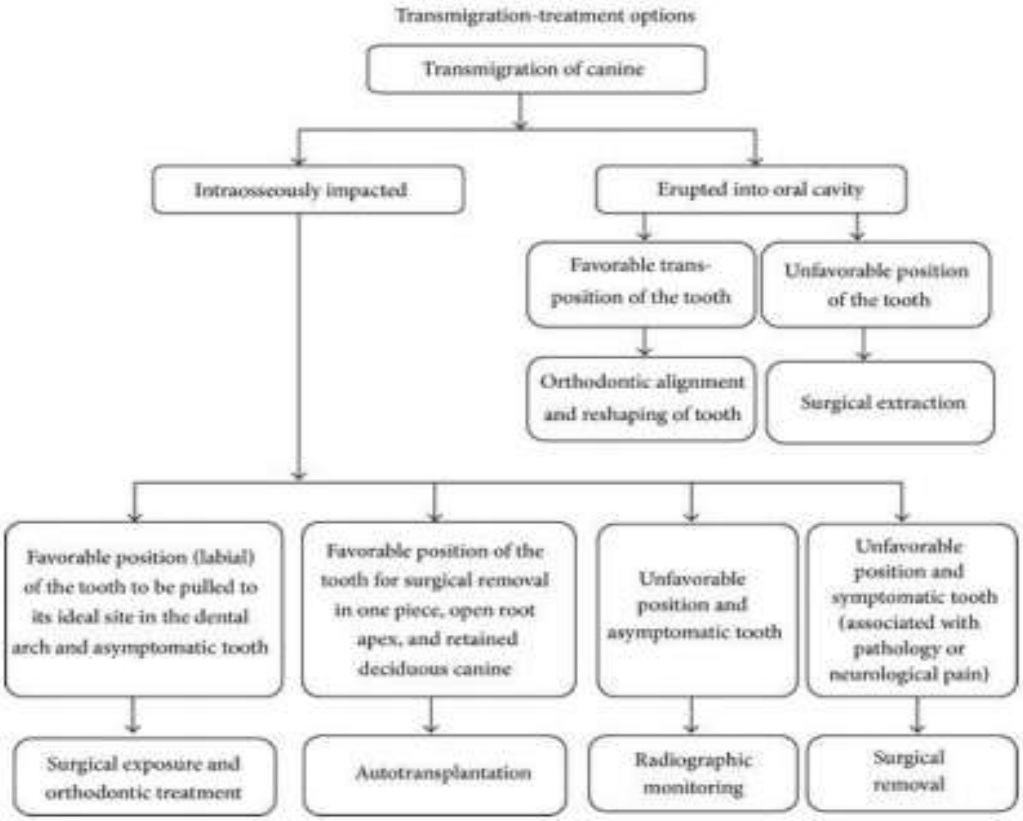

FIG:8Flowchart depicting the various treatment options to aid in decision making for the management of canine transmigration. associated with pathology. So excision of the pathology along with extraction of the impacted teeth as well as primary canines was done in our case.

Conclusion:-

In this case study, profoundly impacted mandibular canines that were related to the root apex of adjacent tooth were successfully removed. In order to achieve good result, the case emphasizes the significance of meticulous preoperative planning, proper surgical technique and postoperative management. This case study highlights the necessity of customized treatment planning to maximize patient outcomes and adds to the body of knowledge already available on the surgical management of impacted canine.

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