INTRODUCTION
The American Academy of Pediatric Dentistry (AAPD) defines early childhood caries (ECC) as “the presence of one or more decayed (noncavitated or cavitated lesions), missing (due to caries), or filled tooth surfaces in any primary tooth in a child 71 months of age or younger.” Untreated ECC can irreversibly destroy the dentition, cause abscesses, and may result in serious illness. Certain features specific in children with ECC are the presence of high levels of Streptococcus mutans in the bacterial plaque (acquired early from their mothers or other family members/other people) and prolonged and high consumption of sweetened drinks. Other risk factors associated with ECC include nocturnal bottle feeding, prolonged breastfeeding, poor oral hygiene, lack of fluoride in toothpastes, social-economic status, level of education of the parents. Therefore, it is necessary for the dentist to recognize the real risk factors associated with caries in both infants.
and pre-school children and then make a treatment plan. The decay pattern of ECC is characteristic and pathognomonic of the condition. ECC initiates on the cervical third of the labial surfaces of the maxillary anterior teeth and concomitantly affects the occlusal surface of the maxillary and mandibular first molars, maxillary and mandibular canines and second molars. The four maxillary incisors are most often affected. The lower primary incisors are intact and the primary cuspids can be occasionally affected. AH Wyne has classified early childhood caries into three types: Type I (mild to moderate) ECC: The existence of isolated carious lesions involving molars and/or incisors. The number of affected teeth usually increases as the cariogenic challenge persists. This type of ECC is usually found in children who are 2 to 5 years old. Type II (moderate to severe) ECC: Labiobuccal carious lesions affecting maxillary incisors, with or without molar caries depending on the age of the child and stage of the disease, and unaffected mandibular incisors. Type III (severe) ECC: Carious lesions affecting almost all the teeth including the lower incisors. This condition is usually found between age 3 and 5 years. The condition is rampant and involves tooth surfaces which are usually unaffected by caries. The early loss of primary anterior teeth may cause reduced masticatory efficiency, loss of vertical dimension, development of speech problems, esthetic-functional problems such as malocclusion and space loss, and psychological problems that can compromise behavioral development of the child.

The present case report describes the oral rehabilitation of a 5 year old child with type II ECC with the aim of eliminating pain related with carious lesions, establishing healthy occlusion and to improve the aesthetic appearance of the teeth to reduce the likelihood of related psychological problems so as to rebuild the self esteem, to prevent development of malocclusion and various parafunctional habits as the child grows up.

CASE REPORT

A five year old boy reported to the department of Pediatric and Preventive dentistry, DIRDS, Faridkot accompanied by his mother. The chief complaint of the child was pain in the upper front teeth region since 1 year. It was informed that Oral hygiene was performed by both the mother and the child, once a day in the morning with toothpaste using scrub method but without flossing. The child takes vegetarian diet and has a habit of eating sweets and candies frequently. No known allergy to food or drugs was found and no history of any oral habits was present. The general health status and past medical history of the patient was not significant. Mother informed that child was fed with breast milk until three years of age. The mother of the child reported that her pregnancy was uneventful with neither medical nor dental treatments. The child was born by normal delivery at nine months of pregnancy. The mother also reported that the child had good general health.

ORAL EXAMINATION

On intraoral examination, buccal mucosa, tongue, floor of mouth, palate appeared normal. Gingiva was reddish pink, firm and resilient without any pigmentation. Total number of teeth present in the mouth were 20. Teeth 51, 52, 55, 61, 62, 64, 65, 75 were found to be carious. Root stumps present were # 51, 52, 61, 62. Filled teeth were # 74, 84, 85. Mandibular anterior teeth had no caries. This is a case of type II ECC affecting maxillary incisors and molars without involving the mandibular incisors.

MANAGEMENT OF THE LESIONS

The treatment plan was decided and explained to the mother and parental consent was taken. On first visit, the child was unfamiliar with the dental environment. The child was made comfortable with dental equipments and behavior management was done by application of audiovisual aids and tell-show-do technique. Assessment of personal oral hygiene, fluoride application, pit and fissure sealants application was performed and home care instructions including oral hygiene and diet counseling were given to the mother. Gross excavation of all lesions as an initial approach was done in the first sitting and GIC restorations were performed w.r.t # 52, 64, 65. In the next visit the food dairy
was checked and the patient was found to be adhering to the counseled diet changes and the oral hygiene measures were reinforced. Pulpectomy was performed w.r.t #75 and stainless steel crown was given for occlusal rehabilitation. Stainless steel crowns were also given w.r.t 54, 55, 75, 84, 85 after treating these with indirect pulp capping. Pulpectomy was also performed w.r.t #51, 61, 62 and obturation with calcium hydroxide and iodoform paste was done. Fiber posts were inserted and composite build up was done w.r.t # 51, 61, 62. Composite build was also performed w.r.t # 52 as this tooth was treated with indirect pulp capping. Treatment was carried out in multiple sittings and full mouth rehabilitation was done. He was recommended to use fluoridated tooth paste and was demonstrated about proper oral hygiene practices. The patient was instructed to keep regular follow up every 3 months for one year. On each visit, intraoral clinical examination was done to check the status of exfoliation of the primary teeth, eruption of permanent teeth, the health status of the periodontal tissues, and compliance with control measures for caries. At follow-up examination after 3 months, the restorations remained intact and no further caries were detected. At six months, the patient had one new carious lesion which was restored with GIC. Patient was motivated to maintain oral hygiene and was instructed to adhere to the diet chart given. After 12 months, patient reported to the department and demonstrated improved self esteem and socialization. The patient had no new carious lesions and had good oral hygiene.

DISCUSSION

ECC treatment implies in the compliance among the dentist, mother, family, and child so that a new food routine is introduced and a new perspective regarding to oral health is accepted. The main causative factor in development of ECC is cariogenic diet and poor oral hygiene. So, in the present case, our first aim was to reduce the carious activity by motivating the patient to initiate proper oral hygiene and diet counseling was also done to reduce the intake of cariogenic diet. The management of patients with ECC at this tender age is a difficult task as the young child is anxious about the dental treatment. Anxiety affects the child’s behavior, and largely determines the success of a dental appointment. In this case report, the child was reluctant and uncooperative in the first visit. So,
the patient was counseled and modeled through behavior modification techniques, which helped in instilling positive dental attitude in the child and increased the success of future treatment. The American Academy of Pediatric Dentistry recommends the modified atraumatic restorative treatment (ART) if there is the slow progression of the caries on dentin, considering the little age of the patients and the easy execution of this type of procedure. The premature loss or grossly decayed primary anterior teeth due to ECC may compromise patient’s self-esteem, embarrass and psychologically traumatize a young child. It can also affect nutritional intake, oral development and lead to malocclusion. The untreated decayed teeth may result in pain and infection which lead to damage to the developing permanent tooth and feelings of personal inadequacy.\(^9\) Restorative treatment modalities for early childhood caries are related to stage of advancement of lesions. When there is severe loss of coronal tooth structure, posts are placed inside the canal after endodontic treatment to give retention, provide stability to the reconstructed crown, and withstand masticatory forces in function. In the restoration of the anterior teeth, esthetics and mechanical resistance to fracture are of great importance for obtaining a long-lasting result, which can be attained through reinforcement of the resinous matrix with fibers.\(^3\) There are various treatment options available for restoration of anterior teeth like natural teeth from a tooth bank or reinforced fibers can be used. The development of the fiber-reinforced composite technology has brought a new material into the realm of metal-free adhesive esthetic dentistry.\(^4\) Different fiber types available are glass fibers, carbon fibers, Kevlar fibers, vectran fibers, and polyethylene fibers. Polyethylene fibers are preferred as they improve the impact strength, modulus of elasticity, and flexural strength, and are almost invisible in the resinous matrix, in contrast to glass fibers, which fail to stick to the resinous matrix and carbon and Kevlar fibers, which interfere with the esthetics. Stainless steel (EZ Pedo crowns, NuSmile, cheng crowns) and polycarbonate crowns, acetate or celluloid matrixes, resinfacets, Zirconia crowns among other technique which are used for restoration of teeth. The acetate matrixes filled with resin composite are used for the oral rehabilitation and have been a good option according to literature. This technique enables that the resin covers all structure of the tooth remnant, protects the tooth against the biofilm and further caries, this also provides resistance and aesthetic. In this case, polyethylene fiber reinforced composite build up was done to improve the aesthetics of anterior teeth. This treatment also helped in rebuilding the self-esteem of child. The success of a treatment also depends on the follow up visits. The recall appointments should be set at each visit based on the clinician’s judgment of the patient’s caries risk for future. Therefore, based on this criteria, recall appointments were planned in our patient. A healthy dentition brings happiness and satisfaction to the parents, child and also to the dental team who provided the information, instruction and reinforcement.

**CONCLUSION**

The treatment described in the case report is simple and effective technique for rehabilitation of grossly destroyed primary anterior and posterior teeth. This combined technique of polyethylene fibres and composite resin does provide excellent functional and esthetic result. Also stainless steel crowns given in posterior teeth provide occlusal rehabilitation. More importantly, the risk factors associated with early childhood caries should be identified at an early age and appropriate treatment should be initiated to prevent the development of abnormalities in the permanent dentition and oral health, diet and acceptance of routine dental care should be maintained and monitored to ensure complete success of the treatment.

**REFERENCES**


Conflict of Interest : None
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