ejpmr, 2023, 10(5), 442-445

SJIF Impact Factor 6.222

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Case Study

ISSN 2394-3211

EJPMR

HEREDITARY GINGIVAL FIBROMATOSIS: A CASE REPORT

[1]*Dr. Sapna Nadiger, [2]Dr. Swathi B. S., [3]Dr. Suchetha Aghanashini, [4]Dr. Darshan Basavaraj Mundinamane, [5]Dr. Apoorva Sokke Mallikarjunappa and [6]Dr. Vinodini

[1,4,5]MDS, Reader, [2]Post-Graduate, [6]MDS

[1,2,4,5,6]Department of Periodontics, D A P M R V Dental College Bangalore.

[3]MDS, Professor and Head Department of Periodontics, D A P M R V Dental College Bangalore.

***Corresponding Author: Dr. Sapna Nadiger**

MDS, Reader, Department of Periodontics, D A P M R V Dental College Bangalore.

Article Received on 28/02/2023 **Article Revised on 20/03/2023** **Article Accepted on 10/04/2023**

ABSTRACT

Background: Hereditary gingival fibromatosis (HGF) is characterized by, slow progressive overgrowth of the gingiva. The excess gingival tissue can cover part of or the entire crown of a tooth, and can result in diastemas, teeth displacement, retention of primary or permanent teeth, and may also cause masticatory, phonetics and esthetic problems. **Case presentation:** This present case report addresses the diagnosis, and case management of hereditary form of gingival fibromatosis. A 13-year-old girl was referred from department of orthodontics, who was presented with progressive gingival enlargement which hindered Orthodontic treatment for the correction of malaligned teeth of the lower anteriors. Therefore, this case was managed with conservative periodontal treatment approach. The initial course of treatment included scaling, followed by gingivectomy and gingivoplasty. Since the clinical appearance of the gingival enlargement was found to be more fibrous than inflammatory in nature, microscopic examination of the gingivectomy specimens was carried out which showed dense bundles of collagen fibres in the connective tissue which supported the clinical diagnosis. Similar condition was noted in family members as well. There was no recurrence of the condition 3months later. **Conclusion**: Hereditary gingival fibromatosis is a rare disorder characterized by the proliferative fibrous overgrowth of the gingival tissue. Surgical excision of excess tissue is the treatment of choice. However, recurrence is a common feature.

INTRODUCTION

Gingival fibromatosis (GF) is relatively a rare condition of gingival disease. It is characterised by non-hemorrhagic, benign, slow, progressive, local, or diffuse, proliferative fibrous overgrowth of the gingiva.[1] This GF condition may sometimes be associated with hereditary factors which occurs as isolated that is (non-syndromic) hereditary gingival fibromatosis or can be present as a part of syndrome or chromosomal abnormalities.[2]

Thus Hereditary Gingival fibromatosis (HGF) is defined as GF linked to hereditary factors and may occur as a non-syndromic entity or coexist with many genetic syndromes[2] such as juvenile hyaline fibromatosis[3], and Rutherfurd syndrome.[4,5] There is an equal gender predilection noted with phenotypic frequency of occurrence 1:750,000.[6] The age of onset usually occurs during eruption of the deciduous teeth or during eruption of permanent teeth and rarely noted during the time of birth. HGF tend to involve both maxilla and mandible with varying degree of gingival enlargement from mild to severe form.[7] The gingiva in HGF appears to have normal colour, having firm in consistency with exaggerated stippling.

It covers the teeth totally or in part, leading to significant aesthetic, phonetic, and masticatory disorders. The overgrowth involves the attached gingiva, the gingival margin, and the interdental papillae.[8] Histological feature of HGF is non-specific. The histological appearance of HGF tend to show abundant connective tissue with densly arranged collagen fibres, with increased fibroblast appearance. The connective tissue appears to be avascular along with thin elongated rete pegs.[9]

HGF can be treated with various treatment modalities such as surgical excision by using scalpel method, or laser-assisted excision of the gingiva.[10]

This present case report, illustrates a hereditary gingival fibromatosis case and its management in a 13-year-old female patient.

CASE REPORT

A 13-year old girl was referred from Department of Orthodontics, to Department of Periodontics, with a chief complaint of excess growth of the gums in the lower front teeth region which intervened the orthodontic treatment. The patient also informed that this growth was seen since her childhood.

Her medical history was non-contributory and was not under any medications. Her family history also revealed that both her mother and grandmother revealed similar clinical features of gingiva.

Clinical examination

Intra-oral examination revealed, the gingival enlargement appeared as pale pink, firm and fibrotic in consistency, covering most of the lower anterior teeth upto the incisal surface.

The enlargement appeared to be irregular with nodular pattern. Patient didn't have any difficulty in speech and mastication. Also there was presence of pseudopockets and slight bleeding on probing was noted. Panoramic radiograph showed few retained primary dentitions and no bone loss or any kind of bony enlargement was appreciated. Thus, the provisional diagnosis was made as hereditary gingival fibromatosis. The choice of treatment suggested to the patient was surgical excision of the lesion.

Treatment

Pre-procedural mouth rinse of chlorhexidine (0.12%) was given, followed by supragingival scaling was done to remove the local irritants at the initial visit. Following which the surgical procedure was carried out after a week.

Surgical procedure

Firstly, pre-procedural rinse with 0.12% chlorhexidine was carried out, following which local anesthesia [2% lignocaine hydrochloride with 1: 80,000 epinephrine] was administered. A periodontal probe was used to outline the base of the pseudo-pockets with small bleeding points on the buccal side of the gingival enlargement of lower anterior teeth. The bleeding points outlined the incision. Gingivectomy was carried out by giving internal bevel incision with the help of a Bard Parker blade No. 15, followed by intrasulcular incision was given to remove the excess tissue growth in the mandibular anterior region. The tissue was excised with the help of a curette. Gingivoplasty was done to provide proper contour to the gingival margin. The excised tissue was sent for histopathological examination. The surgical site was covered with a periodontal dressing. Post-surgical instruction was given and oral hygiene maintenance was adviced to follow by doing a regular 0.12% chlorhexidine mouth rinse twice a day for 2 weeks. Patient was adviced to report back after a week for removal of the periodontal dressing.

Histopathological findings

Heamatoxylin and eosin stained sections revealed parakeratinized stratified squamous epithelium with elongated rete pegs. The underlying connective tissue, composed of numerous bundles of dense collagen fibres.

With the help of the above information obtained, that is by both clinical and histopathological findings and the family history, we were able to arrive at the diagnosis to be as hereditary gingivalfibromatosis.

Patient was recalled after 1 week and periodontal dressing was removed and irrigated with saline, postsurgical healing was satisfactory. Patient was on follow up of 5months which showed satisfactory healing and no recurrence of the condition noted.

FIGURES

Fig 1. Preoperative facial view showing gingival enlargement in lower anteriors.

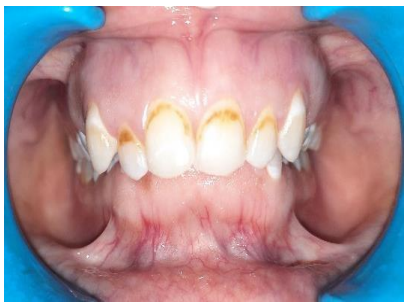

Fig 2. Intra-oral picture of patients mothers, showing familial aggregation.

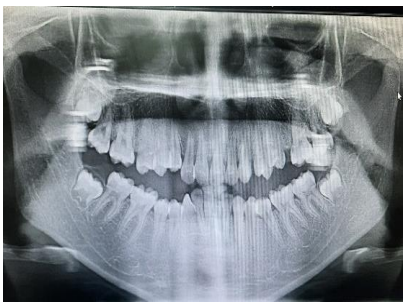

Fig 3. Orthopantogram showing no bone loss and presence of retained deciduous teeth.

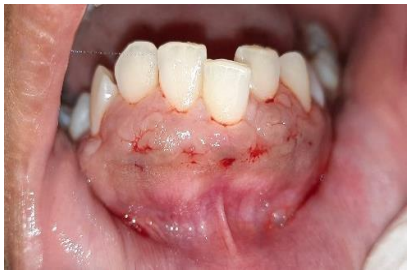

Fig. 4: Bleeding points were marked to outline the incision with the help of periodontal probe.

Fig. 5: External beveled gingivectomy followed by gingivoplasty.

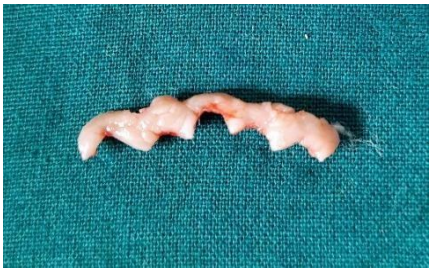

Fig. 6: Excised tissue.

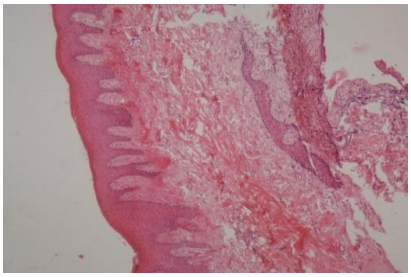

Fig. 7: Histological section showing hyperplastic overlying epithelium with elongated epithelial ridges that project deeply into the underlying connective tissue.

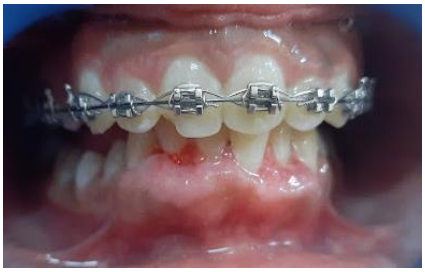

Fig. 8: Post-operative view after 1week of post-surgery.

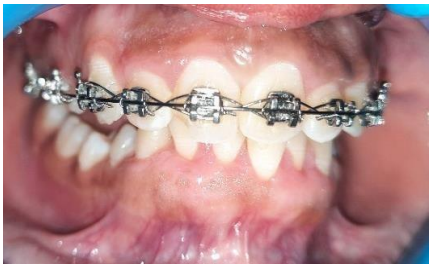

Fig. 9: Intra-oral photograph, after 5 months of follow-up with no recurrence of the gingival enlargement.

DISCUSSION

This article reports the case of hereditary gingival fibromatosis case. The diagnosis was made on the basis of clinical presentation, family history and histopathological features. HGF is designatedwith several other terms such as elephantiasis gingivae, congenital familial fibromatosis, and idiopathic fibromatosis.[5] Congenital microgingivae, hypertrophic gingiva.[11]

Enlargement can be further categorized as localized or generalized depending on the extent of involvement. In this present case, it was a localized gingival enlargement involving the buccal aspect of the gingiva of the mandibular anterior teeth. Differential diagnosis for gingival enlargement includes, presence of inflammation, or could be due to leukemic infiltration or could be associated with use of certain medication such as Cyclosporin, Phenytoin and Nifedipine.[11] etc.

GF can be due to familial or idiopathic origin.[12] In our case we arrived at our diagnosis of gingival fibromatosis to be as hereditary solely based on the patient's family history of occurrence of gingival enlargement noted in both her mother and grandmother which was not justified by furtherinvestigation.

The growth of the gingival hyperplasia is noted during eruption of permanent teeth or during the time of eruption of deciduous teeth and rarely seen at the time of birth.[13]

In the present case, the patient reported that gingival enlargement was noted since her childhood, that is probably during the time of eruption of permanent teeth. The most common effects of gingival enlargement are mal-positioning of the teeth and prolonged retention of deciduous teeth,which was also noted in our case as well.

The oral manifestation of HGF clinically appears to be pink, firm, thick, exaggerated stippling with fibrous gingiva with little or no inflammatory changes[12], which was similarly noted in presentcase.

The histologic findings of this case were classic features of gingival fibromatosis. The tissue showed abundant collagen bundles with overlying parakeratinized epithelium along with elongated rete pegs.

Many authors suggest that, the treatment option for HGF varies according to the severity of the enlargement. Various treatment modalities such scalpel technique, laser and even electrosurgery are recommended for excision of enlarged tissue.[14] In our case, depending on the severity of involvement we chose conventional technique that is external beveled gingivectomy with scalpel technique. Though other treatment modalities have additional benefits over scalpel, that is use of laser or electrocautery, presents minimal bleeding, less time taking procedure, yet in my opinion, in terms of providing proper physiological contour to the gingiva, scalpel found to be more favorable with precision compared to other technique like electrocautery when in bone contact, likely to cause necrosis due to inadvertent heat production.[15] Though HGF cannot be completely cured, an attempt can be done to control with varying degree of success. However, irrespective ofthe technique used in management of HGF, longterm follow up is necessary due to high probability of recurrence observed in HGF.[16] On the contrary, there are several other authors who have reported HGF cases with no recurrence of the condition in a period of 2years follow-up by (Rameret al. 1996), 3 years follow-up (Bittencourt et al. 2000), or even a 14-year follow-up (Günhan et al. 1995).[17] In the present case, there was no recurrence noted post 5 moths of follow-up.

CONCLUSION

Hereditary gingival fibromatosis is a rare condition characterized by fibrous overgrowth of the gingival tissue. Sometimes, Gingival fibromatosis can result in aesthetic and functional impairment which requires surgical intervention, although the condition cannot be cured, yet an attempt can be made to control and also provide psychological benefit with aesthetic improvement which can out weight the risk of recurrence with HGF. Various treatment options are available depending upon the severity of enlargement, however, longterm follow-up is essential to avoid or manage the chances of recurrence.

REFERENCES

1. Aboujaoude S, Aoun G. Hereditary Gingival Fibromatosis: A Report of a Severe Case. Cureus, Mar 17, 2022; 14(3).
2. Gawron K, Łazarz-Bartyzel K, Potempa J, Chomyszyn-Gajewska M. Gingival fbromatosis: clinical, molecular and therapeutic issues. Orphanet J Rare Dis., 2016; 11: 9.
3. Kalgaonkar PS, Wade M, Warke C, Makhecha M, Khare M: Juvenile hyaline fibromatosis- a rare autosomal recessive disease. J Clin Diagn Res., 2017; 11: SD04-6.
4. Higgs JE, Clayton-Smith J: Rutherfurd syndrome revisited: intellectual disability is not a feature. Clin Dysmorphol, 2015; 24: 125-7.
5. Ahlawat S, Siddiqui ZR, Yadav SK. Gingival Fibromatosis: A Rare Case Report. The Traumaxilla. Apr 13, 2022; 26323273211073765.
6. Fletcher JP. Gingival abnormalities of genetic origin: a preliminary communication with special reference to hereditary generalized gingival fibromatosis. J Dent Res., 45: 597-6.
7. Bozzo L, Machado MA, de Almeida OP, Lopes MA, Coletta RD. Hereditary gingival fibromatosis: report of three cases. The Journal of clinical pediatric dentistry, Jan 1, 2000; 25(1): 41-6.
8. Babu KB, Pavankumar K, Anuradha BR, Arora N. Hereditary gingival fibromatosis-a case report and management using a novel surgical technique. RSBO Revista Sul-Brasileira de Odontologia, 2011; 8(4): 453-8.
9. Collan Y, Ranta H, Vartio T, Perheentupa J, Raeste AM. Histochemical and biochemical study of hereditary fibrous hyperplasia of the gingiva. Scand J Dent Res., 1982; 90: 20-8.
10. Gawron K, Łazarz-Bartyzel K, Potempa J, Chomyszyn-Gajewska M: Gingival fibromatosis: clinical, molecular and therapeutic issues. Orphanet J Rare Dis., 2016; 11: 9.
11. Ramer M, Marrone J, Stahl B, Burakoff R. Hereditary gingival fibromatosis: Identification, treatment, control. J Am Dent Assoc, 1996; 127: 493-5.
12. Roman-Malo L, Bullon B, de Miguel M, Bullon P. Fibroblasts collagen production and histological alterations in hereditary gingival fibromatosis. Diseases, May, 25, 2019; 7(2): 39.
13. Dhadse PV, Yeltiwar RK, Pandilwar PK, Gosavi SR. Hereditary gingival fibromatosis. Journal of Indian Society of Periodontology, Oct, 2012; 16(4): 606.
14. Chaurasia A. Hereditary gingival fibromatosis. National Journal of Maxillofacial Surgery, Jan, 2014; 5(1): 42.
15. Glickman I, Imber L; Comparision of gingival resection with electrocautery and periodontalknives - a biometric and histologic study, journal of Periodontology, 1970; 142.
16. Anand Nayak P, Nayak UA, Khandelwal V, Ninave N: Idiopathic gingival fibromatosis. Int JClin Pediatr Dent., 2011; 4: 77-81.
17. Baptista IP. Hereditary gingival fibromatosis: a case report. Journal of clinical periodontology, Sep, 2002; 29(9): 871-4.