

# Microdontia Involving Mandibular Lateral Incisor: A Rare Case Report

Dr. Kirti Saharan<sup>1</sup>, Dr. Shivaprasad S.<sup>2</sup>, Dr. Ashok L.<sup>3</sup> and Dr. Shubha C.<sup>4</sup>

<sup>1</sup> Rajiv Gandhi University of Health Sciences

Received: 6 December 2017 Accepted: 3 January 2018 Published: 15 January 2018

---

## Abstract

The size of teeth, when smaller than normal is termed as microdontia. Microdontia involving a single tooth is frequently seen. It commonly affects the maxillary lateral incisor and the third molars. A common form of microdontia which affects the maxillary lateral incisor is known as 'peg lateral.' But localized involvement of mandibular lateral incisor is very rare entity in itself. Hence, this article describes a rare finding of microdont mandibular lateral incisor in a 9-year-old Indian female.

---

**Index terms**— microdontia, mandibular, lateral incisor.

## 1 I. Introduction

Microdontia is a condition where the teeth are smaller than the normal size, which may involve all the teeth or be limited to a single tooth or a group of teeth. Localized involvement of mandibular lateral incisor is rare. Hence, this article tends to describe a rare finding of microdont mandibular lateral incisor in a 9-year-old Indian female making this case report educationally and clinically important.

## 2 II. Case Report

A 9 year old female patient reported to the department of Oral Medicine and Radiology, Bapuji Dental College and Radiology, Davangere, Karnataka with a chief complaint of pain in the left lower back tooth region since 4 days. History revealed that the pain was severe in intensity, throbbing type, aggravated on taking food. Her past dental, medical, family and personal history were non-contributory. On examination, the patient's face looked symmetrical with convex facial profile and no temporomandibular joint abnormality. (Fig. ??). Intraorally, patient had mixed dentition with Class II caries in 54, 64, 74 and 84. 74 and 84 were tender on percussion. Also conspicuous was the microdont permanent mandibular left lateral incisor. On careful examination of the mandibular arch, a small sized tooth was noted (Fig. ??). On revisiting the past patient's mother revealed that they were of normal history about the deciduous mandibular incisors, morphology and were not subjected to any trauma. IOPA was advised w.r.t 74, 42 and 84. IOPA w.r.t 42 revealed reduced mesiodistal dimensions of 42 as compared to the adjacent tooth (Fig. ??). Hence, a diagnosis of Acute irreversible pulpitis w.r.t 74 & 84. Patient was subjected to further evaluation after treatment of 74 and 84. Maxillary and mandibular casts were poured and measurement of mandibular lateral incisors was done for both right and left side with Vernier callipers which revealed the mesio-distal dimension of 32 to be 6mm and 42 to be 4.5mm, cervico-incisal dimension of 32 to be 7mm and 42 to be 5mm and buccolingual dimensions of 32 to be 6mm and 42 to be 4.5mm which confirmed the presence of small tooth (Fig. 4). Patient was kept under follow-up.

## 3 III. Discussion

The term "Microdontia" is used to describe teeth which are smaller than normal, i.e. outside the usual limits of variation. Three types of microdontia are recognized: (1) true generalized microdontia, (2) relative generalized microdontia, and (3) microdontia involving a single tooth. (2) Bargale et al., (2011) classified microdontia of a

42 single tooth as: (1) microdontia of the whole tooth, (2) microdontia of the crown of the tooth, and (3) microdontia  
43 of the root alone.<sup>3</sup> Microdontia involving only a single tooth is a rather common condition. It affects most often  
44 the maxillary lateral incisor followed by the third molar. One of the common forms of localized microdontia  
45 is that which affects the maxillary lateral incisor, a condition that has been called the 'peg lateral'. (2) The  
46 prevalence of microdontia varies between 0.8 to 8.4% (Neville et al, 2005) 4. Four different studies conducted on  
47 Indian population showed a prevalence rate of 0.16%, 1%, 2.58% and 4.3% with maxillary lateral incisors (peg  
48 laterals) most frequently affected (Sharma & Singh 2014). 5 Occurrence of pegshaped incisors in the mandibular  
49 arch is a rare finding. The prevalence of peg shaped lateral in the maxilla to be 7.5% in Asians and 1.6% in  
50 non-Asians. The prevalence of peg shaped mandibular incisor, unilateral has been reported to be 1% of the  
51 population ??Rajab LD & Hamdan MA, 2002). 6 The occurrence being common in girls when compared to  
52 boys. 7 English literature showed only six reported cases of peg shaped microdontia in the mandibular arch,  
53 including Sharma A. Strong association has been suggested between hypodontia and microdontia. The etiology  
54 of such dental developmental anomalies is obscure. While racial difference in prevalence suggests that genetic  
55 factors may be a more probable reason to the congenital absence of teeth, variable etiology exists including  
56 hereditary, environmental or endocrine disturbances.<sup>13</sup> There are several genes implicated in tooth agenesis, but  
57 mutations occurring in MSX1, PAX9, AXIN2, and EDA are shown to be involved in nonsyndromic human tooth  
58 agenesis.<sup>13,14</sup>

59 The syndromes associated with microdontia are Gorlin-Chaudhry -Moss syndrome, Williams's syndrome,  
60 Ullrich-Turner syndrome, Chromosome 13 syndrome, Rothmund-Thomson syndrome, Hallermann-Streiff,  
61 Orofaciodigital syndrome (type 3), Oculomandibulo -facial syndrome, Tricho-Rhino-Phalangeal and type1  
62 Branchiooculo-facial syndrome. 15 Treatment approach has to be case specific and depends on the condition  
63 of primary predecessor, number of missing teeth, status of occlusion / occlusal condition and patient/ parent's  
64 preferences.<sup>12</sup>

## 65 4 IV. Conclusion

66 Microdontia whether generalized or localized can cause dental disharmony in the form of discrepancy between  
67 arch and tooth size, midline shift and further causing functional and aesthetic alterations. Since dental esthetics  
68 is known to affect the overall quality of life, it is important that a multidisciplinary approach is adopted in the  
69 treatment of patients with such type of tooth deformity. Hence, early diagnosis and appropriate management of  
70 these dental anomalies is indispensable. <sup>1</sup>

---

123

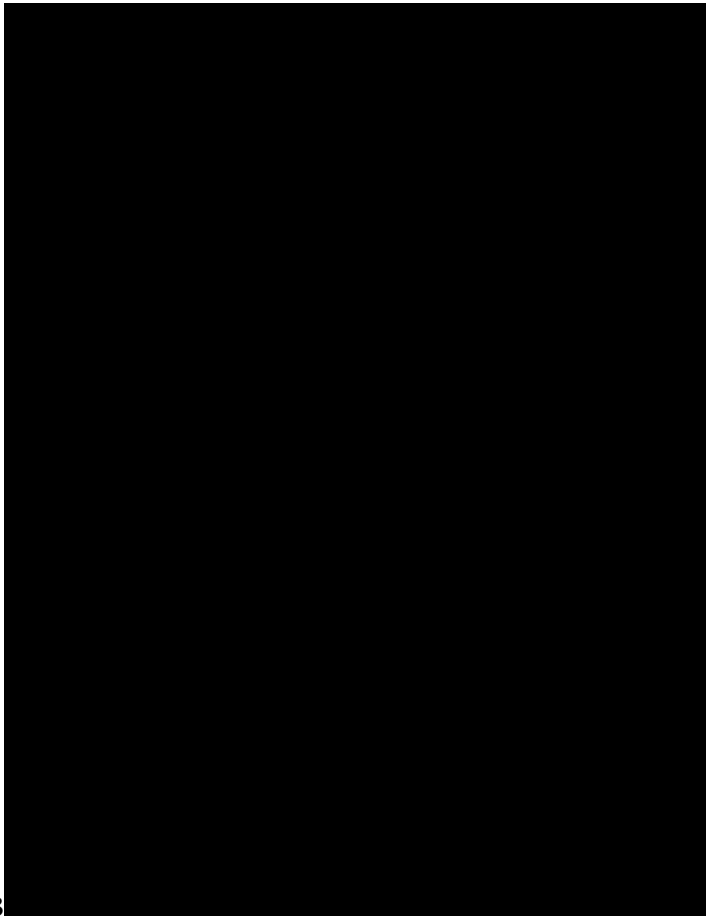


Figure 1: Fig. 1 :Fig. 2 :Fig. 3 :



4

Figure 2: Fig. 4 :



Figure 3:



- 
- 71 [Gunashekhar et al. ()] 'A rare case of congenital absence of permanent canines associated with other dental  
72 anomalies'. M Gunashekhar , K S Rao , B Dutta . *J. Clin. Exp. Dent* 2011. 3 p. .
- 73 [Sharma and Singh ()] 'A Rare Presentation of Non-Syndromic Unilateral Peg Shaped Mandibular Central  
74 Incisor -A Case Report'. S Sharma , S Singh . *J. Res. Adv. Dent* 2014. 3 p. .
- 75 [Anziani et al. ()] 'An Unusual Dental Anomaly in a Hypodontia Patient'. H Anziani , B Cole , R Hobson .  
76 *Dental Update* 2010. 37 p. .
- 77 [Chanchala and Nandlal ()] 'Coexistent Peg Shaped Mandibular Central Incisors Along with Maxillary Lateral  
78 Incisors: A Rare Case'. H P Chanchala , B Nandlal . *Int. J. Oral Maxillofac Pathol* 2012. 3 p. .
- 79 [Devasya and Sarpangala ()] 'Dracula tooth: A very rare case report of peg-shaped mandibular incisors'. A  
80 Devasya , M Sarpangala . *J. Forensic Dent Sci* 2016. 8 p. .
- 81 [Galluccio et al. ()] 'Genetic basis of non-syndromic anomalies of human tooth number'. G Galluccio , M  
82 Castellano , La Monaca , C . *Arch Oral Biol* 2012. 57 p. .
- 83 [Bargale and Kiran (2011)] 'Non-Syndromic Occurrence of True Generalized Microdontia with Mandibular  
84 Mesiodens -A Rare Case'. S D Bargale , S D P Kiran . *Head Face Med* 2011: 7: 19.
- 85 [Neville et al. ()] *Oral & Maxillofacial pathology. 2 nd Ed.: Philadelphia: WB Saunders Company*, B W Neville  
86 , D D Damm , C M Allen , J E Bouquot . 2002. p. 73.
- 87 [Ramachandra et al. ()] *Peg Shaped Mandibular Central Incisor. Dental Update*, S S Ramachandra , V Baliga ,  
88 K D Jithendra . 2009. 36 p. .
- 89 [Rathore et al. ()] 'Peg shaped mandibular lateral incisor in a hypodontia patient: A Case Report'. R Rathore ,  
90 R G S Phulari , S Jain . *IJSS Case Reports & Reviews* 2015. 8 (1) p. .
- 91 [Rajendran and Shivapathasundharam ()] *Shafer's Textbook of Oral Pathology. 7 th Ed*, R Rajendran , S  
92 Shivapathasundharam . 2012. New Delhi: Elsevier. p. .
- 93 [Rajab and Hamdan ()] 'Supernumerary teeth: review of literature and a survey of 152 cases'. L D Rajab , M A  
94 Hamdan . *Int. J. Paediatr Dent* 2002. 12 (4) p. .
- 95 [Byahatti ()] 'The concomitant occurrence of hypodontia and microdontia in a single case'. S M Byahatti . *J*  
96 *ClinDiagn Res* 2010. 4 p. .
- 97 [Malleshi et al.] 'The Unusual Peg Shaped Mandibular Central Incisor-Report of Two Cases'. S Malleshi , S  
98 Basappa , S Negi , A Irshad , S K Nair . *J. Res. Prac. Dent* 2014 p. .
- 99 [Sharma ()] 'Unusual Localised Microdontia: Case Reports'. A Sharma . *J. Indian Soc. Pedo. Prev. Dent* 2001.  
100 19 (1) p. .