Harika et al., Pediatr Dent Care 2016, 1:2
DOI: 10.4172/2573-444X.1000112



**K** : Lipoma; Intramuscular; cytogenetic pro le

**I**

Lipoma is de ned as a benign, slow growing neoplasm composed of mature fat cells [1]. e etiology persists unclear. About 15 to 20% of the cases a ect the head and neck region, while 1-4% involves the oral cavity, an uncommon site for the occurrence of lipoma [2]. e foremost description of oral lipomas was given by Roux in 1848 in a review of alveolar mass; he referred it as a “yellow epulis” [1]. Usually, they are localized super cially to the enclosing fascia in the subcutaneous tissues (subcutaneous lipoma). However, lipomas may be restricted deep under the enclosing fascia; these are called deep-seated lipomas. e lipoma which originate within the muscles are referred as intra muscular lipomas [3]. Speci c chromosomal aberrations such

formation of these oral lipomas however this theory is less convincing in expl

the tumor. e majority of lipomas had no internal vascularity as seen in the present cases on ultrasound although some of them expressed mild and minimal vascularity. Tumors with entrapped muscle bers may appear heterogeneous and will have internal striations on ultrasound imaging [11]. Although histological diagnosis is the gold standard for diagnosis of lipomatous tumors, speci c chromosomal abnormalities had been described in intramuscular lipomas to predict the disease course. Bassett et al. found that the cytogenetic studies of intramuscular lipomas unveiled simple translocations or loss of chromosomal material involving the q14-15 region on chromosome 12, paracentric or pericentric inversions of chromosome 12q14-15, aberrations involving 6p21-22, or loss of material from the q12-14 or q22 region of chromosome 13. e rearrangements involving 12q14-15 and 6p21-22 lead to over expression of HMGIC and HMGIY, respectively. e proteins encoded by these genes are high mobility group proteins that are involved in determining chromosomal structure and are known to a ect gene expression globally [14]. Lipomas are frequently characterized by aberrations of the 12q13-q15 chromosomal region and o en by rearrangements of the HMGA2 gene. ese rearrangements include the organization of chimeric genes that fuse the 5' region of HMGA2 with a variety of partners, such as LPP (3q28) or NFIB (9p22), a HMGA2-NFIB fusion and a translocation t(9;12) (p22;q14) in a deep seated intramuscular lipoma [15]. Bao et al. reported a case of a three-way translocation t (1; 4; 12) (q25; q27; q15) as the sole chromosomal abnormality in an 8-year-old girl with an intramuscular lipoma [16]. Other studies showed abnormalities involving chromosome region 12q13-15 speci cally translocations with 3q27-28, 1p32-34, 21q21-22, 2p21-23, and other non-recurrent rearrangements. Abnormalities not involving 12q13-15 include lipomas with deletion 13q, ring chromosomes, and rearrangements of 6p21-23, 11q13, 1p36, and 13q12-q22 [17].

## C

Although further knowledge is needed to better interpret the spectrum of cytogenetic characteristics of lipomatous tumors broadly and intramuscular lipomas in nical, it is decipherable that cytogenetic analysis can be of diagnostic value in histologically borderline or di cult cases.

## P I P D

As cytogenetic analysis is quickly becoming an inbuilt part of the diagnostic work up it helps in predicting the disease course before its occurrence. To our knowledge this is the rst paper to provide knowledge regarding the genetic aspects of intraoral lipomas.

## A ' C

Study concept and design: Dr. Rapala Harika. Acquisition of data: Dr. V. Daneshwari. Analysis and interpretation of data: Dr. Arun Parsa. Dra ing of manuscript: Dr. Raveen Teja P.

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