



**ORIGINAL RESEARCH PAPER**

**Dental Science**

**ANIMATES AND INANIMATES RELATED TO ORAL MEDICINE**

**KEY WORDS:** Clinical features, Disease, Histologic features , Radiographic features.

<b>Sunanda Chavva</b>	Professor ,Department of Oral medicine and Radiology,Panineeya Institute of Dental sciences, Hyderabad,India.
<b>N.V.S.Sekhar Reddy</b>	Professor ,Department of Oral and Maxillofacial Surgery ,Panineeya Institute of Dental sciences, Hyderabad,India.
<b>M.Hima Priya*</b>	MDS ,Department of Oral medicine and Radiology,Panineeya Institute of Dental sciences, Hyderabad,India. *Corresponding Author
<b>Pallavi Bidari</b>	PG Student,Department of Oral medicine and Radiology,Panineeya Institute of Dental sciences, Hyderabad,India.
<b>Rutuja Waghamare</b>	PG Student,Department of Oral medicine and Radiology,Panineeya Institute of Dental sciences, Hyderabad,India.

**ABSTRACT** Each disease will have its own course and presentation. It will leave an identity mark on history,clinical examination, radiographic examination and histopathological findings. It allows the doctor to diagnose and treat a condition based on its features. The people who described diseases used some terminologies which are useful for us to know a disease. These are known by some terminologies which are given below. It can be used for Aunt Minnie method also, that is using knowledge given by elders or others.

**INTRODUCTION:-**

Various disorders or lesions appearing in the oral cavity have been named according to their appearances. Sometimes these appearances resemble like certain animals or some objects. Hence

they are named accordingly. This article helps the students to memorise the various terminologies for different lesions based on their appearances.

<b>APEEARANCE</b>	<b>DISORDERS</b>
Giraffe's spots	Cafe au lait spots- These spots resemble coffee with milk or spots on giraffe, they are also called coast of maine spots in French. They are seen in conditions like 'Mc Cune Albright syndrome', neurofibromatosis <sup>1</sup>
Cheetah spots	Cafe au lait spots resembling cheetah spots. If the borders are irregular as in Mc Cune Albright syndrome,they are called coast of maine. If the borders are smooth as in other disorders like neurofibromatosis, Addison's disease, they are called coast of California <sup>1</sup> .
Eagle's talon (claw)	Talon's cusp- its a type of dental anomaly where there is extra cusp on cingulum. It was first described by W.H. Mitchell ,B.S.Kimball Mellor and Louis W Ripa in 1982 as resembling eagle's claw. It occurs more in maxillary laterals (55%) followed by maxillary centrals (33%), lower incisors (6%) and maxillary canines (3%). Its also called interstitial cusp. Its a type of dens evaginatus . Its associated with Rubinstein Taybe syndrome and orofacial digital II syndrome. Problems include – Occlusal interferences, esthetics, caries. Treatment includes- regular follow up every six months,fluoride application, pit and fissure sealants, coronoplasty,Root canal treatment and extraction <sup>2,3</sup>
Butterfly shaped lesions	Malar rash seen in conditions like systemic Lupus Erythematosus, bloom syndrome, dermatomyositis and pellagra. The rash is seen on malar process that is cheeks and bridge of nose. It's also called as vesperilio rash as it resembles bat and its wings. Its exact etiology is unknown. It is thought to be vasculitis with photodermatitis due to ultraviolet light or exposure to sunlight. Characteristically nasolabial folds are spared <sup>4</sup>
Butterfly shaped lesions	Angiofibromas on face in Tuberous sclerosis- fleshy, warty lesions on cheeks and nose in a butterfly fashion. They are also can be found on scalp, nails ,forehead. Old concept was, they were considered to be sebaceous adenomas. Now, they consider them as angiofibromas. They can be treated with topical sirolimus in white soft paraffin <sup>5</sup>
Butterfly shaped lesions	Sublingual keratosis Or truely leukoplakia in floor of mouth and under tongue. It has high malignant potential due to thin mucosa and pooling of carcinogens in this site and stay in contact for long time. This site is also a hidden area preventing or delaying the detection. It has bilateral corrugated wrinkle surface texture resembling ebbing tide <sup>6</sup>
Butterfly children	Skin in children affected by hereditary severe Epidermolysis bullosa is fragile as butterfly wings.These children are called butterfly children.
Crocodile tears	Crocodile tears or gusto lacrimation is a rare complication when there is pathology in and around optic ganglion and facial nerve that is Bells palsy. In some cases like trauma, gustatory fibers destined to supply salivary glands become secretory fibers to lacrimal glands resulting in homolateral tearing while the patient is eating. Removal of a part of lacrimal gland will be therapeutic based on Schirmer's test. <sup>7</sup>

<p>Tongue –gustatory sweating</p>	<p>Gustatory sweating in 'Frey's Syndrome', which is also known as auricotemporal syndrome, Baillarger syndrome or Dupuy's syndrome and gustatory neuralgia. Its a autosomal dominant condition.</p> <p>Also it can occur as neurologic condition where there is damage to parotid gland due to any surgery or some disorder effecting parotid gland.</p> <p>This causes damage to auriculo temporal nerve which supplies the parotid gland. The damaged nerve fibers connect to the sweat glands found along the skin.</p> <p>Because of this, patient will experience sweating in front of the ear while eating and in response to gustatory stimulus<sup>8</sup>.</p> <p>Diagnosis can be made by clinical signs and symptoms and starch iodine test. Iodine is applied to the face and starch is put on it. Blue colour is produced in presence of sweat. This condition is treated by botulinum toxin, deodorants, topical glycopyrrolate, scopolamine ointment ( anticholinergic) and surgery<sup>9,10</sup></p>
<p>Nipple</p>	<p>Papilloma is a exophytic growth which resembles nipple or fingers. Its caused due to human Papilloma virus 6 and 11.</p> <p>It is pedunculated or sessile .it can be confused to verruca vulgaris occurring Intraorally, condyloma acuminatum and focal epithelial hyperplasia.</p> <p>Conservative surgical excision is the treatment of choice with rare recurrence.</p>
<p>Pink colour -Pink's disease</p>	<p>It is also called as acrodynia.</p> <p>Acro means extremities, oown means pain. Its also called as hydrargyria, mercurialism, erythredema, erythredema polyneuropathy, Bilderbeck's, Selter's, Swift's and Swift-Feer disease.</p> <p>This is caused due to exposure to heavy metals like mercury in laxatives, antiseptics and drugs used for yellow fever, syphilis. It can affect children.</p> <p>The affected patients hands, feet and become dusky red giving the name pinks disease. There is hair plucking , photosensitivity, nervous irritability, neuropsychiatric symptoms and loss of teeth, hair.</p> <p>Treatment includes stopping of the causative agent, Ethylene diamine tetra acetic acid (EDTA) and dimercaptosuccinic acid (DMSA).<sup>11</sup></p>
<p>Pink's tooth of mummeri</p>	<p>In Internal resorption of tooth, there is resorption of dentin and pulpal walls. Pulp fills up the resorbed areas and appears pink under enamel which gives the name pink tooth.</p> <p>Its exact etiology is unknown. Thought to be due to trauma, infection. Deciduous tooth resorption also causes pink tooth.</p> <p>It is treated by root canal treatment.(RCT)</p>
<p>Railway track</p>	<p>Tramline calcifications are seen in sturge weber syndrome and Basal cell nevus- bifid rib syndrome. There are parallel lines of calcifications in the cortex of brain resembling railway track in the radiographs. Terminology 'Tram line' calcification is also used to describe calcifications in cortex in renal cortical necrosis even though it is different from the former.</p>
<p>Wolf</p>	<p>Lupus in latin means wolf. It is used to describe destructive injuries caused by disease.</p>
<p>Lupus Vulgaris</p>	<p>Skin when affected by tuberculosis is called lupus vulgaris. There will be ulcers with undermined edges, granulomas with caseation necrosis, tuberculomas that are swellings, scrofula or cervical lymphadenopathy and collar stud abscess along the collar of the neck.</p> <p>The ulcer has undermined edges because of sub epidermal plexus involvement more than superficial tissue( burrowing nature).</p> <p>There might be associated pulmonary infection. Sometimes there might me allergic or ID reaction to mycobacterium tuberculosis which causes the disease.</p> <p>Treatment includes administration of antitubercular drugs, isoniazide, rifampicin, pyrazinamide, ethambutol and streptomycin for nine months or more.<sup>12, 13.</sup></p>
<p>Lupus erythematosus</p>	<p>Systemic lupus erythematosus(SLE) is also called lupus erythematosus. It mimics other diseases to a greater extent.</p> <p>Multisystem involvement occurs in SLE. Its an autoimmune disorder.</p> <p>It has malar rash. ACR SLE clasification of SLE by SLICC in 2013 has given 11 criteria out of which 4 should be fulfilled or renal biopsy proven lupus nephritis with ANA or double stranded anti DNA antibodies should be positive.the 11 criteria include</p> <ol style="list-style-type: none"> <li>1. Acute cutaneous lupus (e.g., malar rash or photosensitivity and other)</li> <li>2. Chronic cutaneous lupus (e.g., classic discoid lupus and other)</li> <li>3. Oral ulcers or nasal ulcers</li> <li>4. Nonscarring alopecia</li> <li>5. Synovitis involving 2 or more joints, characterized by swelling or effusion OR tenderness in 2 or more joints and at least 30 minutes of morning stiffness</li> <li>6. Serositis</li> <li>7. Renal Urine protein greater than or equal to 500 mg protein/24 hours OR red blood cell casts</li> <li>8. Neurologic disease (Seizures, psychosis, mononeuritis multiplex, myelitis, peripheral or cranial neuropathy, acute confused state).</li> <li>9. Hemolytic anemia</li> <li>10. Leukopenia (&lt;4000/mm<sup>3</sup> at least once) OR Lymphopenia (&lt;1000/mm<sup>3</sup> at least once)</li> <li>11. Thrombocytopenia (&lt;100,000/mm<sup>3</sup>) at least once</li> </ol>

	<p>Immunologic criteria</p> <ol style="list-style-type: none"> <li>1. ANA level above laboratory reference range</li> <li>2. Anti-dsDNA antibody level above laboratory reference range</li> <li>3. Anti-Sm: presence of antibody to Sm nuclear antigen</li> <li>4. Antiphospholipid antibody positivity</li> <li>5. Low complement</li> </ol> <p>Low C3 Low C4 Low CH50</p> <p>6. Direct Coombs' test in the absence of hemolytic anemia</p> <p>The management includes antimalarials, corticosteroids, nonbiologic DMARDs like cyclophosphamide, methotrexate, azathioprine, mycophenolate mofetil, cyclosporine, NSAIDs like ibuprofen and biologic DMARDs that is disease modifying anti rheumatic drugs like monoclonal antibodies and IV immunoglobulin<sup>14</sup></p>
Frog's belly	Mucocele of sublingual salivary gland occurring in the floor of the mouth resembling frog belly (Rana) <sup>14</sup> It has tail appearance in MRI. <sup>15,16</sup>
Velvet lesions	Erythroplakia, Acanthosis nigricans, Lingua villosa i.e., hairy tongue <sup>17,18,19</sup>
Screw driver shaped	Incisors in syphilis <sup>20</sup>
Cork screw shaped	Treponema pallidum, syphilis bacteria because of their appearance <sup>21</sup>
Mulberry bush	Mulberry molars in syphilis because of their appearance <sup>22</sup> .
Stain	Mottled teeth in dental fluorosis <sup>23</sup>
Bird face	TMJ Ankylosis <sup>24</sup>
Bird face	Treacher Collins syndrome <sup>25</sup> , Goldenhar syndrome <sup>26</sup>
Lines	Wickham's striae in lichen planus <sup>27</sup>
Tyndall effect	Pigmented lesions like hemangiomas reflect blue light and absorb other colours and appear blue. This effect is called Tyndall effect. <sup>28</sup>
Spider	Spider-like naevi in liver cirrhosis that are telangiectasia <sup>29</sup>
Spider hands and feet	Arachnodactyly (long limbs like spider) in Marfan syndrome. <sup>30</sup>
Crow's feet	Wrinkles at lateral part of eye due to ageing. Treated by botulinum toxin or vertical myectomy. <sup>31</sup>
Lipstick sign	Lips sticking to each other in xerostomia e.g., Sjogren's syndrome <sup>32</sup>
Tongue blade sign	Tongue blade sticking to oral mucosa in xerostomia <sup>32</sup>
Sun ray	Sunray appearance in sarcomas of bone like osteogenic sarcoma, chondrosarcoma, Ewing's sarcoma <sup>33</sup>
Sunray fungus	Misnomer of actinomycosis bacteria <sup>34</sup>
Triangle	Codman's triangle is seen in radiographs of osteogenic sarcoma <sup>35</sup>
Cobblestone appearance	Mucosa in Crohn's disease <sup>36</sup>
Cobblestone appearance	Granulomatosis with polyangiitis (Wegener's granulomatosis) <sup>37,38</sup>
Cherry blossom appearance	Cherry blossom tree or branch less fruit laden tree appearance in sialography of Sjogren's syndrome where the contrast agent escapes through the atrophied ducts. Also called snow storm appearance <sup>39</sup> .
Cauliflower shaped calcifications	Calcified lymph nodes e.g., tuberculosis. <sup>40</sup>
Lemon on stick appearance	Thin hands and legs, obese abdomen in Cushing's syndrome <sup>41</sup>
Ball in hand appearance	Radiographic picture in intrinsic tumour of salivary gland with the tumour compressing duct <sup>42</sup>
Starry sky appearance	Burkitt's lymphoma <sup>43</sup>
Darling's disease	Histoplasmosis is a fungal infection also called Darling's disease, Cave's disease, Caver's disease and Ohio valley disease. <sup>44</sup> It was first described by Samuel Taylor Darling.
Kissing's disease	Infectious mononucleosis it is a sexually transmitted disease (STD) <sup>45</sup>
Floating teeth	In Aggressive periodontitis, bone is lost causing the teeth to float <sup>46</sup> , Langerhans cell histiocytosis due to bone destruction <sup>46</sup> , Malignancies of jaws <sup>46</sup> . Cherubism <sup>47</sup>
Copper	Copper beaten appearance in craniofacial dysostosis like Crouzon syndrome where there is early fusion of cranial sutures causing developing brain to put impressions on skull. It is also called as beaten silver beaten brass appearance <sup>48</sup>
Hair on end appearance	Hemolytic anaemias like Sickle cell anaemia, thalassemia. Inner and outer cortices are thinned with bony trabeculae lying at right angles to cortices in radiographs <sup>49</sup> .
Hairy appearance	Hairy cell leukemia-histologic appearance. B lymphocytes appear hairy under microscope. <sup>50</sup>  Hairy leukoplakia of tongue in AIDS and non AIDS patient in clinical picture. It is caused by Epstein Barr virus <sup>51</sup> .
Doughnut sign	Bone scan finding in Aneurysmal Bone Cyst with enhanced uptake at periphery and Photopenic centre <sup>52</sup>
Salt and pepper	Hyperparathyroidism with decreased bone density and granular trabeculae, Multiple Myeloma with bone defects <sup>53,54</sup>
Fish vertebrae	Sickle cell disease <sup>55</sup>

Jug handle view	Submentovertex view <sup>56,57</sup>
Water's view	Paranasal sinus view <sup>56</sup>
Ground glass appearance	Periapical lesions radiographic picture, Fibrous dysplasia radiographic picture <sup>58</sup>
Fingerprint appearance	Periapical lesions radiographic picture, Fibrous dysplasia radiographic picture <sup>59,60</sup>
Button Mouth, Fish mouth	Thin and pursed lips in Scleroderma <sup>61,62</sup>
Sword / knife	Sabre like lesion in scleroderma in head and neck region. <sup>62</sup>
Claw like Hands	Scleroderma <sup>62</sup>
Sausage shaped	Inflamed fingers in psoriatic arthritis, Sialodochitis, dilation of ductal system. <sup>56</sup>
Crystal/crystalline arthritis	Crystals of uric acid in gout, gouty arthritis <sup>63</sup>
Crab like	Syndactyly in Lobster Claw syndrome <sup>64</sup>
Pouched cheeks, Bud like or hockey stick uvula	Oral submucous fibrosis <sup>65</sup>
Salmon spot, Oil spot	Nail psoriasis <sup>66</sup>
Salmon patch, Angel's kiss	Nests of blood vessels in hemangioma or birthmarks (phakomatosis) <sup>67</sup>
Eyes raised to heaven appearance	Angels of Renaissance art in Chinese paintings seen in cherubism patients <sup>56</sup>
Snail track ulcers	Mucous patches or ulcers with greyish pseudomembrane occurring in secondary syphilis coalesce to form snake like or snail track ulcers. <sup>13</sup>
Toadstool(mushroom name) appearance	TMJ, Juvenile arthrosis of childhood or boerings arthrosis <sup>56</sup>
Swan neck deformity	Rheumatoid arthritis <sup>68</sup>
Cotton wool appearance	Pagets disease, Diffuse sclerosing osteomyelitis <sup>56</sup>
Soldier trench mouth	Necrotising ulcerative periodontitis(ANUG) <sup>69</sup>

**CONCLUSION:-**

It should be made interesting to write, read, know and practically in the patient to get maximum benefit to the patient and hence Doctor.

**REFERENCES:**

- 1) Chapurlat RD, Orcel P. Fibrous dysplasia of bone and McCune-Albright syndrome. Best Pract Res Clin Rheumatol. 2008 Mar;22(1):55-69. doi: 10.1016/j.berh.2007.11.004.
- 2) Mellor J, Kimball, Ripa, Louis W.(1970-02-01) "Talon cusp: A clinically significant anomaly". Oral surgery, Oral medicine, Oral Pathology. 29(2):225-228.
- 3) Neville BW; Chi AC; Damm DD; Allen CA (13 May 2015). Oral and Maxillofacial Pathology. Elsevier Health Sciences. pp. 80–81
- 4) Luis Uva, Diana Miguel, Catarina Pinheiro João Pedro Freitas, Manuel Marques Gomes, and Paulo Filipe Cutaneous Manifestations of Systemic Lupus Erythematosus Autoimmune Dis. 2012; 2012: 834291.
- 5) Resham J Vasani . Facial Angiofibromas of Tuberous Sclerosis Treated with Topical Sirolimus in an Indian Patient. Indian J Dermatol. 2015 Mar-Apr; 60(2): 165–169.
- 6) Odell W (2010). Clinical problem solving in dentistry (3RD ed.) Edinburgh:Churchill Livingstone. pp.209-217.
- 7) McCoy FJ, Goodman RC. The crocodile tear syndrome. Plast Reconstr Surg. 1979 Jan;63(1):58-62.
- 8) Office of Rare Diseases Research (2011). "Frey's syndrome". National Institutes of Health. Retrieved 17 December 2012.
- 9) Choi, Hyo Geun; Kwon, Sae Young; Won, Jung Youn; Yoo, Seung Woo; Lee, Min Gu; Kim, Si Whan; Park, Bumjung (2013). "Comparisons of Three Indicators for Frey's Syndrome: Subjective Symptoms, Minor's Starch Iodine Test, and Infrared Thermography". Clinical and Experimental Otorhinolaryngology. 6(4): 249).
- 10) M. Boyd Gillespie, David W. Eisele, in Complications in Head and Neck Surgery (Second Edition), 2009
- 11) Austin D. W. An epidemiological analysis of the 'autism as mercury poisoning' hypothesis. Int. Risk. Safety Med. 2008;20:135–40.
- 12) Bailey, H., Love, R. J. M. N., Mann, C. V., & Russell, R. C. G. (1992). Bailey and Love's short practice of surgery. London: Chapman & Hall Medical.
- 13) S.R. Prabhu. Oral diseases in the tropics. Oxford university press 1992. Edition 1.
- 14) Burket, L. W., Greenberg, M. S., & Glick, M. (2015) Burket's oral medicine: Diagnosis & treatment. Hamilton, Ont: BC Decker. 12th Edition; Chapter 20. p503.
- 15) White, S. C., & Pharoah, M. J. (2009). Oral radiology: Principles and interpretation. St. Louis, Mo: Mosby/Elsevier.
- 16) Daniel Kokong ,Augustine Iduh, Ikechukwu Chukwu, Ranula: Current Concept of Pathophysiological Basis and Surgical Management Options. World J Surg. 2017; 41(6): 1476-1481.
- 17) Moni Abraham Kuriakose. Contemporary Oral Oncology: Biology, Epidemiology, Etiology, and Prevention. 2017:34-35.
- 18) Meghana Madhukar Phiske An approach to acanthosis nigricans. Indian Dermatol Online J. 2014 Jul-Sep; 5(3): 239–249.
- 19) Samuel A. Wolfson, M.D. Black hairy tongue associated with penicillin therapy. JAMA. 1949;140(15):1206-1208.
- 20) Shafer, Hine and Levy: Shafer's textbook of oral pathology, 7th edition, p: 52
- 21) Justin D. Radolf. Medical Microbiology. University of Texas Medical Branch at Galveston; 1996. 4th edition, chapter 36.
- 22) Larissa Pessoa and Virgilio Galvão Clinical aspects of congenital syphilis with

- Hutchinson's triad BMJ Case Rep. 2011.
- 23) Frederick S. McKay D.D.S. The Study of Mottled Enamel (Dental Fluorosis) The Journal of the American Dental Association Volume 44, Issue 2, February 1952, Pages 133-137.
- 24) El-Sheikh MM, Medra AM, Warda MH. Bird face deformity secondary to bilateral temporomandibular joint ankylosis. J Craniomaxillofac Surg. 1996 Apr;24(2):96-103.
- 25) Feingold M, Baum J. Goldenhar's Syndrome. Am J Dis child. 1978;138(2):136-138.
- 26) Dixon J, Trainor P, Dixon MJ. Treacher Collins syndrome. Orthod craniofac Res 2007;10(2):88-95.
- 27) Silonie Sachdeva, Shabina Sachdeva, and Pranav Kapoor . Wickham striae: Etiopathogenesis and clinical significance Indian J Dermatol. 2011 Jul-Aug; 56(4): 442–443.
- 28) Fernandez-Flores A, Montero MG. Ashy dermatosis, or "Tyndall-effect" dermatosis. Dermatol Online J. 2006 May 30; 12(4):14.
- 29) Maya Vedamurthy, Amar Vedamurthy. Spider nevi: A presenting feature of chronic liver disease. Indian J Dermatol venerol leprol 2008; 74:397-8.
- 30) Ali Al Kaissi, Elisabeth Zwettler, Musculo-Skeletal Abnormalities in Patients with Marfan Syndrome. Clin Med Insights Arthritis Musculoskelet Disord. 2013; 6: 1–9.
- 31) Aston, Sherrell J. M.D. New Treatment for Crow's Feet Wrinkles by Vertical Myectomy of the Lateral Orbicularis Oculi. Plastic and Reconstructive Surgery: July 2003 - Volume 112 - Issue 1 - p 280-281.
- 32) Burket, L. W., Greenberg, M. S., & Glick, M. (2015). Textbook Burket's oral medicine. Hamilton, Ont: BC Decker. 12th Edition; Chapter 10. p 222.
- 33) Zile Singh Kundu. Classification, imaging, biopsy and staging of osteosarcoma. Indian J Orthop. 2014 May-Jun; 48(3): 238–246.
- 34) Sriram Bhat M SRB's Clinical Methods in Surgery. Second edition. p 160.
- 35) Rittenberg, G.M., Schabel, S.I., Vujic, I. et al. Skeletal Radiol. (1978) 2: 243.
- 36) Gingisetty Harikishan, Nagate Raghavendra Reddy, Oral Crohn's disease without intestinal manifestations J Pharm Bioallied Sci. 2012 Aug; 4(Suppl 2): S431–S434.
- 37) Burket, L. W., Greenberg, M. S., & Glick, M. (2015). Textbook Burket's oral medicine. Hamilton, Ont: BC Decker. 12th Edition; Chapter 10. p 257.
- 38) Ugan et al. Granulomatosis with polyangiitis and subglottic stenosis. Eur J Rheumatol 2017.
- 39) Jethlia A, Keluskar V, Shetti A. Sjogren's syndrome. J Indian Acad Oral Med Radiol 2008;20:85.
- 40) Anil Govindrao Ghom, Savita Anil (Lodam) Ghom. Textbook of Oral Medicine. Jaypee brothers medical publishers Ltd. Third edition; Chapter 26. p 680.
- 41) Burket, L. W., Greenberg, M. S., & Glick, M. (2015). Textbook Burket's oral medicine. Hamilton, Ont: BC Decker. 11th Edition; Chapter 21. p 525.
- 42) Nisheet Anant Agni, Rajiv Mukund Borle. Salivary Gland Pathologies ; Chapter 6. p 45.
- 43) Patankar S et al. Burkitt's lymphoma of maxillary gingival. World J Clin Cases 2015 December 16; 3(12): 1011-1016.
- 44) Rapini, Ronald P.; Bologna, Jean L.; Jorizzo, Joseph L. (2007). Dermatology: 2-Volume Set. St. Louis: Mosby.
- 45) Paul Lennon, Michael Crotty, John E Fenton : BMJ 2015;350:h1825.
- 46) C.R. Staalman, A.J.M.C. Aarts. Floating teeth a forgotten phenomenon J Belge Radio. Beljisch Tijdschr Radiol. 1984;67:317-20.
- 47) Dysanoor Sujatha, Naik Shobha. International Journal of Medical Dentistry volume 2 (3) 2012 • pp. 232-236.
- 48) Desai V, Priyadarshini SR, Sharma R. Copper Beaten Skull! Can it be a Usual Appearance? Int J Clin Pediatr Dent 2014;7(1):47-49.
- 49) M Azam and N Bhatti. Hair on end appearance. Arch Dis Child. 2006 Sep; 91(9):

- 735.
- 50) Sam O. Wanko and Carlos de Castro Hairy Cell Leukemia: An Elusive but Treatable Disease. *The Oncologist* July 2006; 11(7) 780-789.
  - 51) Burket, L. W., Greenberg, M. S., & Glick, M. (2015). *Textbook Burket's oral medicine*. Hamilton, Ont: BC Decker. 12th Edition; Chapter 5, p 99.
  - 52) Tyagi, S., Hans P., Kumar, H., Mohan, V. Radiology of aneurysmal bone cyst at uncommon locations Report of two cases. *Int J Adv Int Med Sci* 2016; 1(2):72-74.
  - 53) Gursimran Kaur, Parminder Singh, Naveen Mittal, 1 and Mani Kant Singla 1 Resolution of "salt and pepper" appearance of the skull with vitamin D therapy *Indian J Endocrinol Metab*. 2013 Oct; 17(Suppl1): S194-S197.
  - 54) Christopher J. Hanrahan, MD, PhD, et al Current Concepts in the Evaluation of Multiple Myeloma with MR Imaging and FDG PET/CT. *RadioGraphics* 2010; 30:127-142.
  - 55) P G Ntangiopoulos, D-A Moutzouris, S Manetas. The "fish-vertebra" sign. *Emerg Med J* 2007; 24:674-675.
  - 56) White, S. C., & Pharoah, M. J. (2009). *Oral radiology: Principles and interpretation*. St. Louis, Mo: Mosby/Elsevier.
  - 57) Siddana SG, Muniraju M. Simplified zygomatic technique to overcome the drawback of jug handle view. *J Indian J Acad Oral Med Radiol* 2014; 26:390-2.
  - 58) V. Nityasri et al. Fibrous dysplasia of the jaws in south India. *Dentomaxillofacial Radiology* (2011) 40, 282-289.
  - 59) Petrikowski, C. Grace et al. Radiographic differentiation of osteogenic sarcoma, osteomyelitis, and fibrous dysplasia of the jaws. *Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology and Endodontics*, Volume 80, Issue 6, 744-750.
  - 60) Burket, L. W., Greenberg, M. S., & Glick, M. (2015). *Textbook Burket's oral medicine*. Hamilton, Ont: BC Decker. 12th Edition; chapter 20, p 505.
  - 61) Jagadish, R., Mehta, D. S., & Jagadish, P. (2012). Oral and periodontal manifestations associated with systemic sclerosis: A case series and review. *Journal of Indian Society of Periodontology*, 16(2), 271-274.
  - 62) Thilo Gambichler et al. Bilateral linear scleroderma "en coup de sabre" associated with facial atrophy and neurological complications *BMC Dermatology* 2001, 1:9.
  - 63) E. Pascual. Management of crystal arthritis. *Rheumatology*, Volume 38, Issue 10, 1 October 1999, Pages 912-916.
  - 64) Gupta S, Kumar S, Ray U. Lobster claw syndrome: A rare entity. *Indian Journal of Plastic Surgery : Official Publication of the Association of Plastic Surgeons of India*. 2013; 46(1):158-159.
  - 65) Seema Basoya. Etiopathogenesis and management of oral submucous fibrosis. *Quality in primary care*. 2015(6)327-332.
  - 66) Alka Dogra and Amanjot Kaur Arora. Nail Psoriasis: The Journey So Far. *Indian J Dermatol*. 2014 Jul-Aug; 59(4): 319-333.
  - 67) Wolff K, Goldsmith LA, Katz SI, Gilchrist BA, Paller AS, Leffell DJ, eds. *Fitzpatrick's Dermatology in General Medicine*, 7th ed. New York, NY: McGraw-Hill; 2008:2270-2271.
  - 68) Colledge, N. R., Walker, B. R., Ralston, S., & Davidson, S. (2010). *Davidson's principles and practice of medicine*. Edinburgh: Churchill Livingstone/Elsevier. p 1366.
  - 69) Burket, L. W., Greenberg, M. S., & Glick, M. (2015). *Textbook Burket's oral medicine*. Hamilton, Ont: BC Decker. 12th Edition; chapter 4, p 67-68.