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Food similes and metaphors in oral pathology: A review

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Abstract
The study of oral pathology is challenging but fascinating. By relating to the things we see frequently, a simple, straightforward method might reduce the tiresome effort of memorization of pathological features. In clinical, radiological, or histological representations, many diseases frequently resemble different foods. Thus, oral pathologists frequently name these diagnostic representations after food entities that we use in daily life to make the study of oral pathology easier and more fascinating. So, in an effort to make the study of oral pathology easier and more entertaining, we have endeavoured to assemble the culinary analogies that we employ in oral pathology.

Keywords: Food similes, metaphors, oral pathology

Introduction
A simile is a figure of speech that compares two, unlike things that are often introduced by like or as whereas a metaphor is when a word is used in place of another to suggest a likeness [1]. Metaphors have been used as a teaching tool for a very long time. Metaphor is an excellent technique for introducing unfamiliar material. It is also obvious that it can be utilized for the retention and recall of facts and facilitates connecting with new facts
Oral pathology is an engrossing yet strenuous subject. An easy, simpler, and straightforward approach can minimize the tedious task of memorizing pathological features by comparing them with things we see on a routine basis. Pathologists are always casting around for hints and pointers to arrive at the diagnosis, sometimes walking a fine line between two diseases. Often many diseases resemble various food items in clinical, radiographic, or histological representation. Hence to make the study of oral pathology simpler and more interesting we have attempted to compile the food metaphors which we use in oral pathology.

Clinical
1. **Apple jelly nodules:** They are small, well-defined, gelatinous-looking lesions that are characteristic of lupus vulgaris [2].
2. **Blueberry muffin baby:** They are seen in babies with the presence of purpura on the head, neck, and body. They are seen in congenital Cytomegalovirus infection [3], Langerhans cell histiocytosis, and rhabdomyosarcoma [4].
3. **Café au lait spots:** They are well-defined, evenly pigmented macules and patches that are seen in children with disorders, most often neurofibromatosis type 1 [5].
4. **Cottage cheese appearance:** The white plaques and patches on the gingiva and labial mucosa in pseudomembranous candidiasis [6].
5. **Cauliflower-like appearance:** An exophytic growth that frequently develops in squamous cell carcinoma and squamous papilloma and has a rough surface that resembles a cauliflower [7].
6. **Mulberry-like erosions:** Patients with paracoccidioidomycosis have granulomatous lesions on their mucous membranes. Oral lesions of paracoccidioidomycosis in the gingiva present as mulberry-like ulcers with haemorrhagic dots [8].
7. **Mulberry molars:** First molars that are affected have an occlusive flat surface and only

the bare outlines of their typical cusps. This is a syphilitic stigmata [9]. Mulberry molars have also been reported in cases without syphilis [10].

8. **Port wine stain:** This manifests as reddish-pink discoloration on the skin due to swollen blood vessels (Capillary haemangioma)**.** This is commonly observed in Sturge-Weber syndrome [11].
9. **Salmon patch:** A stork bite, also known as a salmon patch, is a cluster of pink to reddish-purple blood vessels (capillaries). This appears on a new-born's skin, on the back of their head or neck due to a type of capillary vascular malformation [12].
10. **Salt grains:** Lesions that resemble white or blue salt grains splattered on a red buccal mucosa, also known as Koplik spots, are a symptom of measles. [13].
11. **Strawberry tongue:** Tongue erythema and prominent papillae in scarlet fever give it a strawberry-like appearance. [14].
12. **Strawberry haemangioma/strawberry nevus:** Synonymous with infantile haemangioma [15].
13. **Strawberry gingivitis:** Localized or widespread proliferative gingivitis with a strawberry-like, granular, purplish-red surface that is mottled and irregular in appearance seen in Wegener's granulomatosis [16].

Radiological

1. **Apple core appearance:** In radiation-induced caries, the lesion progresses and encircles the cervical areas of the tooth, giving an apple core appearance on the radiograph. This subsequently leads to increased friability and breakdown of the tooth can follow, and complete amputation of the crown is often seen [17].
2. **Apple tree-like appearance:** Terminal ectasia (dilation) found in Sialadenitis leads to an apple tree-like appearance in sialography due to excessive flow of radiopaque dye to the terminal ends of the ducts [17].
3. **Branchless fruit-laden appearance:** The typical sialography appearance of Sjögren's syndrome is described as punctate, globular and cavitary pseudosialectasis. It is termed pseudosialectasis because the appearance is due to the pooling of the dye in periductal area and not because of the dilation of the ductules. This is described as a branchless tree with fruit-laden appearance [17].
4. **Honeycomb appearance:** Radiographically the internal structure of ameloblastoma varies from totally radiolucent to a mixed radiolucent-radiopaque caused by the presence of bony septae creating internal compartments giving a honeycomb appearance [17].
5. **Orange peel appearance:** Radiographic appearance of fibrous dysplasia manifests an orange peel appearance due to altered internal trabecular pattern of bone [17].
6. **Onion skin appearance:** Radiographically, on an occlusal view, alternate laminations of radiopaque and radiolucent bands are seen. This is termed as onion skin appearance. Examples include Garre's osteomyelitis, osteosarcoma, and Ewing's sarcoma [17].
7. **Salt and pepper appearance:** Radiographically, multiple tiny well-defined radiolucencies in calvaria caused by resorption of trabecular bone in hyperparathyroidism 17.
8. **Sausage string appearance:** The segmental stricture of the duct leads to segmental filling of radiopaque dye in the ducts giving rise to a sausage string appearance in sialography of sialodochitis [17].

Pathological

Microscopic

1. **Apple green birefringence:** The birefringence presented by amyloid stained with Congo red in polarized light [18].
2. **Cloverleaf cells:** The peculiar, multilobulated nuclei with coarse chromatin and prominent nucleoli noted in the large atypical lymphocytes in Adult T-cell leukaemia/ lymphoma [19].
3. **Coffee bean nuclei:** In Langerhans cell histiocytosis, the nucleus in cells exhibits enfolded nuclear membranes with definite longitudinally grooved nuclei [20].
4. **Cornflake artifact:** This is seen on superficial squamous cells caused by air bubbles trapped under the coverslip [21].
5. **Doughnut cells:** These cells present with cytoplasmic pseudo-inclusions formed because of the invaginations of the nuclear membrane seen in anaplastic large-cell lymphoma [22].
6. **Fried egg appearance:** Normal mast cells with central round nuclei and amphophilic cytoplasm [23]. This is also seen in hairy cell leukemia [24].
7. **Ginger root pattern:** Typically found in focally expressed cases of cemento osseous dysplasia where there are thick curvilinear trabeculae or irregularly shaped cementum-like masses that resemble ginger roots [25].
8. **Herringbone pattern:** This refers to the arrangement of tumor cells in short fascicles which split and merge giving the appearance of fish bone seen in fibrosarcoma [26].
9. **Popcorn cell:** This refers to a type of Reed Sternberg cell seen especially in nodular lymphocyte predominant Hodgkin's lymphoma with delicate, multilobulated folded nuclei, visible nucleoli and pale cytoplasm [27].
10. **Raisin-like nucleus:** This is used to describe enlarged nuclei with coarse chromatin and wrinkled nuclear membrane of a koilocyte or nuclei in poorly differentiated carcinoma [28].
11. **Shish-kebab appearance:** Squamous epithelial cells, peculiarly aggregate around these filamentous organisms, appear as if these cells are speared by these pseudohyphae, giving Shish-kebab appearance [29].
12. **Swiss cheese appearance:** Numerous micro cystic pseudoglandular spaces that give adenoid cystic carcinoma a characteristic cribriform or swiss cheese appearance [30].
13. **Shredded carrot appearance:** Histopathology of neurofibroma reveals a well-circumscribed benign tumor with variable myxoid material, and randomly oriented thin-spindled cells which were bland with wavy, hyperchromatic nuclei and thin and thick collagen strands also called "shredded carrot appearance [31].

Macroscopic

1. **Cheesy appearance:** Gross appearance of the caseous necrosis in granulomas produced by the accumulation of lipids from cell walls of Mycobacterium tuberculosis and certain systemic fungi gives a cheesy appearance [32].
2. **Fish flesh appearance:** The gross appearance of the cut surface of lymphoma is smooth, slightly bulging pale tan, white-grey color resembling the appearance of fish flesh [33].
3. **Tender coconut appearance:** Cut section of a hydatid cyst shows a unilocular, thick-walled, cystic structure, whitish in color with a semi-translucent, shiny inner surface that gives tender coconut appearance [34].

Table 1: Summary of similes and metaphors in Oral Pathology

Clinical	Radiographic	Pathological
Apple jelly nodules	Apple core appearance	**Microscopic**
E.g. Lupus vulgaris	E.g. radiation induced caries	Apple green birefringence
Blue berry muffin baby	Apple tree like appearance	E.g. Amyloidosis
E.g. Neonatal Neuroblastoma,	E.g. sialadenitis	Clover leaf cells
Langerhans cell histocytosis,	Branchless fruit laden tree	E.g. T-cell leukaemia
congenital leukaemia cutis	E.g. Sjogren's syndrome	Coffee bean nuclei
Café-au-lait spots	Honeycomb appearance	E.g. Langerhans cell
E.g. Neurofibromatosis type 1	E.g. Ameloblastoma	histocytosis
Cottage cheese appearance	Onion skin/ onion peel	Cornflake artefact
E.g. Pseudomembranous	Appearance	E.g. Microscopic artefact
candidiasis	E.g. Osteosarcoma, Garre's	Doughnut cells
Cauliflower like appearance	osteomyelitis, Ewing's sarcoma	E.g. Large-cell lymphoma
E.g. Squamous papilloma,	Orange peel appearance	Fried egg appearance
Squamous cell carcinoma	E.g. Fibrous dysplasia	E.g. Hairy cell leukaemia
Mulberry like erosions	Salt & pepper appearance	Ginger root pattern
E.g. Paracoccidiocomycosis	E.g. Thalassemia	E.g. Cemento-Osseous
Mulberry molars	Sausage string appearance	dysplasia
E.g. Syphilis	E.g. Siolodochitis	Herring bone pattern
Port wine stain		E.g. Fibrosarcoma
E.g. Capillary Haemangioma		Popcorn cells
Red strawberry tongue		E.g. Hodgkin's lymphoma
E.g. scarlet fever		Raisin like nucleus
Strawberry haemangioma		E.g. poorly differentiated
E.g. Infantile haemangiomas		carcinoma
Salmon patch		Shish- Kebab appearance
E.g. Capillary Vascular		E.g. candidiasis
malformation		Swiss cheese appearance
Strawberry gums		E.g. Adenoid cystic carcinoma
E.g. Wegener's granulomatosis		Shredded carrot appearance
Salt Grains		E.g. Neurofibroma
E.g. Measles (kolpik spots)		**Macroscopic**
White strawberry tongue		Fish flesh appearance
E.g. White coated tongue of		E.g. Cut section of Lymphoma
Scarlet fever		Tender coconut appearance E.g. Cut section of hydatid cyst Cheesy appearance E.g. Caseous necrosis in Tuberculosis

Conclusion

Learning through similes and metaphors simplifies the herculean task of studying of oral pathology as the students can corelate numerous diseases to simple everyday things like food and beverages.

Conflict of Interest

Not available

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