Editorial
Volume 8:2, 2022

Oral Health Case Reports

ISSN: 2471-8726

Open Access

Dental Physiology & Pharmacology an Overview

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Editorial

Analyses of blood's cellular and chemical elements are among the most routinely used laboratory diagnostic techniques. Other biological fluids are used for illness detection, but saliva has several specific advantages. Saliva may be collected non-invasively and by people with little experience. The fluid may be collected without the need of any specific equipment. Because the collection of saliva is linked with less compliance issues than the collection of blood, illness diagnosis by saliva analysis might be beneficial for youngsters and older persons. Furthermore, saliva analysis might be a cost-effective way to test huge groups of people [1].

Saliva is divided into two types: gland-specific and total saliva. Individual salivary glands such as the parotid, submandibular, sublingual, and minor salivary glands can be collected directly for gland-specific saliva. Wharton's duct carries secretions from both the submandibular and sublingual salivary glands into the oral cavity, making it difficult to collect saliva from each gland separately. The collection and analysis of salivary gland secretions is largely used to diagnose gland-specific disease, such as infection and blockage. When salivary analysis is employed for the diagnosis of systemic illnesses, however, entire saliva is most usually investigated.

Gingival crevicular fluid, expectorated bronchial and nasal secretions, serum and blood derivatives from oral wounds, bacteria and bacterial products, viruses and fungi, desquamated epithelial cells, other cellular components, and food debris make up whole saliva (mixed saliva). With or without stimulation, saliva can be collected. Masticatory or gustatory stimulation is used to collect stimulated saliva. The quantity of saliva produced is obviously changed by stimulation, but so are the quantities of certain elements and the pH of the fluid [2,3].

Without any external gustatory, masticatory, or mechanical stimulation, unstimulated saliva is collected. The degree of hydration has the greatest impact on unstimulated salivary flow rate, although it is also influenced by olfactory stimulation, light exposure, body orientation, and seasonal and diurnal variables. The draining method, in which saliva is allowed to flow from the lower lip, and the spitting method, in which the individual expectorates saliva into a test tube, are the best two ways to collect entire saliva. Saliva has antibacterial capabilities and contains a number of growth factors and antimicrobial components. Saliva also has lubricating properties and helps with food digestion [4].

The acinar and ductal portions of the salivary glands are made up of specialised epithelial cells, and their structure may be separated into two distinct areas. Fluid is produced in the acinar area, as is the majority of protein synthesis and secretion. Amino acids enter acinar cells via active transport, and the bulk of proteins are kept in storage granules that are released in response to secretory stimulation following intracellular protein synthesis. Acinar fluid secretion has been studied using three different models. The active transport of anions into the lumen and the transit of water according to the osmotic gradient from the interstitial fluid into the salivary encompass these three models.

The initial fluid is isotonic and comes from the local vascular system. Acinar cells are permeable to water, whereas ductal cells are not. Ductal cells, on the other hand, actively absorb the majority of Na^+ and Cl^- ions from primary salivary secretion and release tiny quantities of K^+, HCO^-_3, and certain proteins. When a result, the main salivary secretion is altered, and the final salivary secretion is hypotonic as it reaches the oral cavity. The salivary secretion is controlled by the autonomic nervous system. Binding of neurotransmitters to plasma membrane receptors, signal transduction via guanine nucleotide-binding regulatory proteins, and activation of intracellular calcium signalling pathways are all part of the signalling system.

Serum components that aren't part of the regular salivary constituents can enter saliva in a variety of ways. Intracellular and extracellular transport pathways exist inside the salivary glands. Passive diffusion is the most prevalent intracellular route; however active transport has also been documented. The most prevalent extracellular route is ultrafiltration, which happens via the tight connections between cells. Diffusion, on the other hand, requires a serum molecule to pass across five barriers: the capillary wall, interstitial space, basal cell membrane of the acinus cell or duct cell, cytoplasm of the acinus cell or duct cell, and luminal cell membrane. GCF outflow results in the presence of serum components in entire saliva. GCF is either a serum transudate or an inflammatory exudate containing serum ingredients, depending on the degree of gingival inflammation [5].

Conflict of interest

None

Reference

1. Kaufman, Eliaz, and Ira B. Lamster. "The diagnostic applications of saliva-A review." *Crit Rev Oral Boil Med* 13 (2002): 197-212.
2. Mandel, I. D. "The functions of saliva." *J Dent Res* 66 (1987): 623-627.
3. Aps, Johan K.M., and Luc C. Martens. "The physiology of saliva and transfer of drugs into saliva." *Forensic Sci Int* 150 (2005): 119-131.
4. Mandel, Irwin D. "The diagnostic uses of saliva." *J Oral Pathol Med* 19 (1990): 119-125.
5. Dodds, Michael W.J., Dorthea A. Johnson, and Chih-Ko Yeh. "Health benefits of saliva: A review." *J Dent* 33 (2005): 223-233.

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Received: 17 February, 2022, Manuscript No. ohcr-22-65824; **Editor Assigned:** 20 February, 2022, PreQC No. P-65824; **Reviewed:** 25 February, 2022, QC No. Q-65824; **Revised:** 04 March, 2022; Manuscript No R-65824; **Published:** 08 March, 2022; DOI: 10.37421/2471-8726.2022.8.48

How to cite this article: Japhet, Francois. "Dental Physiology & Pharmacology an Overview." Oral Heath Case Rep 8 (2022): 48.