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(usually I am 6A-1 but had to switch due to Removable)

Pathology Question:

What is xerostomia?

Report:

Xerostomia is the subjective feeling of dry mouth. Objectively, xerostomia is measured by reduced salivary flow which is termed hyposalivation. However, xerostomia and hyposalivation are not synonymous; it is possible for a patient to present with xerostomia but not be suffering from reduced salivary flow. Saliva has many functions that are very important to the overall health of the oral cavity. Saliva is necessary for aiding in mastication, swallowing, and proper speech. It contains amylsases, mucins, and lipases that aid in chemical digestion before food arrives in the stomach. Saliva has anti-bacterial, anti-viral, and anti-fungal properties. In a person with xerostomia, a dentist might see gross decay and rampant caries due to the loss of anti-bacterial properties found in saliva as well as its ability to buffer acids. Additionally, an individual with xerostomia is more susceptible to mucosal infections such as oral-pharyngeal thrush because the soft tissue is less protected from microbes. Saliva also helps keep the teeth healthy due to its mineralization properties. It is very evident that saliva is extremely important to the health as well as function of the oral cavity—and the absence of it can cause significant dental issues.

Saliva is secreted through three major salivary glands in the head and neck region. The major salivary glands are the parotid, submandibular, and sublingual. There are also around one hundred minor salivary glands that are important in saliva production as well. Saliva is secreted through secretory cells called acini. There is not a direct correlation between aging and increased chance of experiencing dry mouth, but there are some reasons why older individuals might have more feelings of dry mouth. Acini, which are the secretory cells that secrete saliva, decrease in volume with age. The acinar cells are gradually filled with adipose tissue and fibrous tissue. The number of acinar cells does not decrease with age which can be a common misconception with xerostomia.

Xerostomia looks different for everyone who suffers from feelings of dry mouth. As mentioned above, xerostomia is a subjective issue and is different than hyposalivation. Normal salivary flow in stimulated glands, such as when we are chewing, is 1 to 3 mL/minute whereas normal unstimulated or resting flow rate is less than 0.5 mL/minutes. Hyposalivation is characterized by stimulated flow of 0.3 to 0.4 mL/minute and unstimulated flow of less than 0.1 mL/minute. There are multiple etiologies that can contribute to xerostomia. The biggest culprit are medications; xerostomia is a side effect of a wide variety of medications. Radiation to the head and neck area can cause xerostomia as well due to the fact that acinar cells are radiosensitive. Lastly, systemic diseases such as Sjogren's syndrome and diabetes mellitus can cause xerostomia. Unfortunately, there is not a single effective treatment for xerostomia since the cause can vary significantly. The first step is to assess the underlying cause. For example, if it is due to medications, maybe different medications can be prescribed or if it is due to an autoimmune disease, maybe the disease can be addressed which will alleviate the dry mouth.

Additionally, symptoms of dry mouth can be treated such as staying hydrated or stimulating secretions using certain medications. Overall, xerostomia is a very irritating as well as detrimental disease that can really reduce one's oral health and cause severe dental issues.

References:

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