

**DENTAL ABSCESS AS ONE OF THE MAJOR CAUSES OF DENTAL PAIN IN PATIENTS PRESENTING IN OUTDOOR DEPARTMENT**Dr. Zaryab Zaki\*<sup>1</sup>, Dr. Ijaz Hussain<sup>2</sup>, Dr. Komal Baneen<sup>3</sup>

Pakistan.

\*Corresponding Author: Dr. Zaryab Zaki  
Pakistan.  
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**ABSTRACT**

Dental pain, is pain in the teeth or their supporting structures, caused by dental diseases or pain referred to the teeth by non-dental diseases. When severe it may impact sleep, eating, and other daily activities. This observational study was conducted in Nishtar Institute of Dentistry, outdoor departments. All the patients presenting with dental pain were included in this study and the reason of their pain was noted after proper examination. Relevant investigations were carried out. A total of 247 patients were included in this study. The mean age of the patients was  $25.34 \pm 4.37$  years. The mean duration of disease of  $28.12 \pm 3.23$  days. There were 145 males and 102 females in the study. Among the main causes of dental pain, there were tooth abscess (15%), tooth decay (12%), gum disease (10%), tooth fractures (9%), temperature sensitivity (9%), damaged fillings or dental sealants (8%), teeth grinding (8%) and improper brushing or flossing (7%) and various others.

**KEYWORDS:** Dental Pain, Outdoor Department.**INTRODUCTION**

Dental pain, is pain in the teeth or their supporting structures, caused by dental diseases or pain referred to the teeth by non-dental diseases. When severe it may impact sleep, eating, and other daily activities. Common causes include inflammation of the pulp, usually in response to tooth decay, dental trauma, or other factors, dentin hypersensitivity, apical periodontitis (inflammation of the periodontal ligament and alveolar bone around the root apex), dental abscesses (localized collections of pus, alveolar osteitis ("dry socket", a possible complication of tooth extraction), acute necrotizing ulcerative gingivitis (a gum infection), temporomandibular disorder.

Pulpitis is reversible when the pain is mild to moderate and lasts for a short time after a stimulus (for instance cold); or irreversible when the pain is severe, spontaneous, and lasts a long time after a stimulus. Left untreated, pulpitis may become irreversible, then progress to pulp necrosis (death of the pulp) and apical periodontitis. Abscesses usually cause throbbing pain. The apical abscess usually occurs after pulp necrosis, the pericoronitis is usually associated with acute pericoronitis of a lower wisdom tooth, and periodontal abscesses usually represent a complication of chronic periodontitis (gum disease). Less commonly, nondental conditions can cause toothache, such as maxillary sinusitis, which can cause pain in the upper back teeth, or

angina pectoris, which can cause pain in the lower teeth. Correct diagnosis can sometimes be challenging.

Proper oral hygiene helps to prevent toothaches by preventing dental disease. The treatment of a toothache depends upon the exact cause, and may involve a filling, root canal treatment, extraction, drainage of pus, or other remedial action. The relief of toothache is considered one of the main responsibilities of dentists. Toothache is the most common type of pain in the mouth or face. It is one of the most common reasons for emergency dental appointments. In 2013, 223 million cases of tooth pain occurred as a result of dental caries in permanent teeth and 53 million cases occurred in baby teeth. Historically, the demand for treatment of toothache is thought to have led to the emergence of dental surgery as the first specialty of medicine.

**MATERIAL OF METHODS**

This observational study was conducted in Nishtar Institute of Dentistry outdoor departments. All the patients presenting with dental pain were included in this study and the reason of their pain was noted after proper examination. Relevant investigations were carried out. A brief demographic data i.e. name, age, gender, disease duration was noted on a predefined proforma. All the data was entered and analyzed using SPSS Ver. 25. Relevant statistical analysis was performed. The qualitative variables were presented as frequency and

percentages. The quantitative variables were presented as mean and standard deviation.

## RESULTS

A total of 247 patients were included in this study. The mean age of the patients was  $25.34 \pm 4.37$  years, mean age of male patients was  $24.56 \pm 3.78$  years and mean age of female patients was  $26.45 \pm 4.53$  years. The mean duration of disease of  $28.12 \pm 3.23$  days. There were 145 males and 102 females in the study. Among the main causes of dental pain, there were tooth abscess (15%), tooth decay (12%), gum disease (10%), tooth fractures (9%), temperature sensitivity (9%), damaged fillings or dental sealants (8%), teeth grinding (8%) and improper brushing or flossing (7%) and various others.

## DISCUSSION

Toothache may be caused by dental (odontogenic) conditions (such as those involving the dentin-pulp complex or periodontium), or by nondental (non-odontogenic) conditions (such as maxillary sinusitis or angina pectoris). There are many possible non-dental causes, but the vast majority of toothache is dental in origin.

Both the pulp and periodontal ligament have nociceptors (pain receptors), but the pulp lacks proprioceptors (motion or position receptors) and mechanoreceptors (mechanical pressure receptors). Consequently, pain originating from the dentin-pulp complex tends to be poorly localized, whereas pain from the periodontal ligament will typically be well localized, although not always. For instance, the periodontal ligament can detect the pressure exerted when biting on something smaller than a grain of sand ( $10\text{--}30\ \mu\text{m}$ ). When a tooth is intentionally stimulated, about 33% of people can correctly identify the tooth, and about 20% cannot narrow the stimulus location down to a group of three teeth. Another typical difference between pulpal and periodontal pain is that the latter is not usually made worse by thermal stimuli.

Pulpitis (inflammation of the pulp) can be triggered by various stimuli (insults), including mechanical, thermal, chemical, and bacterial irritants, or rarely barometric changes and ionizing radiation. Common causes include tooth decay, dental trauma (such as a crack or fracture), or a filling with an imperfect seal.

Because the pulp is encased in a rigid outer shell, there is no space to accommodate swelling caused by inflammation. Inflammation therefore increases pressure in the pulp system, potentially compressing the blood vessels which supply the pulp. This may lead to ischemia (lack of oxygen) and necrosis (tissue death). Pulpitis is termed reversible when the inflamed pulp is capable of returning to a state of health, and irreversible when pulp necrosis is inevitable. Reversible pulpitis is characterized by short-lasting pain triggered by cold and sometimes

heat. The symptoms of reversible pulpitis may disappear, either because the noxious stimulus is removed, such as when dental decay is removed and a filling placed, or because new layers of dentin (tertiary dentin) have been produced inside the pulp chamber, insulating against the stimulus. Irreversible pulpitis causes spontaneous or lingering pain in response to cold.

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