

# Prevalence of Pulp Stones in Molars According to the Sex

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**Abstract:** Introduction: The dental pulp calcification presents as masses of calcified tissue present on the level of the pulp chamber and roots of the teeth. Materials and Methods: In the study were included random samples 150 patients aged between 20-60 years, or 3108 teeth. The X-ray assessment of the jaws was being made by subjecting the suspected teeth to the panoramix and retroalveolar X-ray according to Dick. Statistically computer analysis was confirmed to the 228 teeth – molars, in both the sexes. Results: From 150 patients or 3108 teeth, 623 teeth (20.04%) has pulp stones. From 623 teeth with pulp stones 425 (68.2%) – molars. The results obtained from the carried out examinations showed that: 425 teeth – molars: 228 (53.6%) in the males and 197 (46.3%) in females. The variation is significant i.e.  $Z = 2.060$ ;  $P = 0.039$ . Conclusion: With this study will provide the dental practitioner with information about the types of the teeth which are more likely to exhibit technical difficulties associated with the endodontic treatment of such teeth.

**Keywords:** teeth, pulp stones, prevalence, molars, the sex, the males, the females, the significant.

## 1. Introduction

The dental pulp calcification presents as masses of calcified tissue present on the level of the pulp chamber and roots of the teeth [1-5].

Radiologically, they are depicted as dense, smooth radiopacities overlying any portion of the crown or root of an otherwise unaffected tooth. The major radiologic differential diagnosis is projection geometry causing overlap of root contours in multirouted teeth. In the primary dentition, radiographic interpretation and detection of the enamel pearl can be complicated by the superimposition of the developing permanent tooth [6].

The formation of pulp stones is still something of an enigma. Studies show that a high frequency of cell islands, considered to be of epithelial origin, were observed together with pulp stone formation in teeth that had been subjected to experimental intrusion [7,8].

A number of predisposing factors, including ageing, caries, operative procedures, as well as periodontal disease have been reported [9].

The pathological effect of irritation by the microorganisms of dental caries on the pulpal tissue can cause a vascular wall injury, resulting in the deposition of calcium salts within the tissue [10]. Others are orthodontic tooth movement, idiopathic and genetic predisposing factors [9].

## 2. Materials and Methods

In the study were included random samples 150 patients aged between 20-60 years, or 3108 teeth.

The X-ray assessment of the jaws was being made by subjecting the suspected teeth to the panoramix and retroalveolar X-ray according to Dick, to carry out programmed Rtg analysis and evaluation of suspected cases with the purpose of making temporary and correct functional

assessment of teeth, which represents an assumption for making further prognostic evaluation.

From 150 random samples patients or 3108 teeth, 623 (20.04%) teeth has denticles. From 623 teeth with denticles - 425 – molars, 172 – premolars, and 26 – incisives.

Statistically computer analysis was confirmed to the 425 teeth – molars, in both the sexes.

## 3. Results

Below are the results obtained by application of the abovementioned methods, shown graphically (Table 1,2) and statistically.

**Table 1:** Prevalence of pulp stones in total teeth of 150 patients, aged 20-60 years

Total teeth	molars	per cent	premolars	per cent	incisive	per cent
	N	n (%)	N	n (%)	N	n (%)
623	425	68.2%	172	27.6%	26	3.2%

Out of 3108 analyzed teeth with denticles, 425 teeth (20.04%) were molars.

**Table 2:** Prevalence of pulp stones in molars of 425 teeth, in both the sexes, aged 20-60 years

Molars		The males		The females	
Teeth	Per cent	Teeth	Per cent	Teeth	Per cent
425	20.04%	228	53.6%	197	46.3%

Statistically computer analysis was confirmed to the 425 teeth – molars, in both the sexes.

### --- Comparison of two proportions ---

Group 1  $n = 425$   $p = 0.536$

Group 2  $n = 425$   $p = 0.463$

The variation is: 0.073

Standard deviation of the variation: 0.0343

95% secure interval in the variation: - 0.005774 to 0.1402

Z = 2.060; P = 0.039

The variation is significant i.e. Z = 2.060; P = 0.039

The variation is significant i.e., the denticles in molars are prevalent in the males according in the females.

#### 4. Discussion

Results for prevalence of pulp stones in molars according to the sex, in this study show that pulp stone are prevalent in the males (53.6%) and females (46.3%). The variation is significant. The data of the present study were collected from the examination of panoramic radiographs from patients who attended at the University Dental Clinic Centre in Skopje "St. Panteleimon". This study investigated pulp stones in adults. No attempt was made to include examination of pulp stones in the permanent teeth of children.

Some studies did not find any difference in occurrence between genders [11,12,13,14]. Whereas other studies have found females to have more pulp stones than males [15,16,17].

The results of the study in south Indian population showed a total no. of patients with pulpal calcification was 227 [females 133 (58.59%) and males 94 (41.40%)]. Between the both sexes, females showed increased incidence of pulp stone. However, some investigators have reported that pulp stones were more common in males than in females, and pulp stones occurred more frequently in the males than in females, whereas there are also studies showing no significant differences between both sexes [10,11,17]. These contradictory findings may be explained by marked differences in the sample size and in the methods used.

The purpose of this study were to describe the prevalence of pulp stones in molars of the sex, using panoramic and retroalveolar radiographs and to explore possible associations between pulp stones and sex; and to compare the results with published data.

#### 5. Conclusion

With this study will provide the dental practitioner with information about the types of the teeth which are more likely to exhibit technical difficulties associated with the endodontic treatment of such teeth.

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