

# Prevalence of Pulp Stones According to the Side

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**Abstract:** Introduction: Pulp stones more often occur in molars than in premolars and incisive. The intention of the study is to determine the prevalence of dental pulp stones occurrence in accordance with the side. Materials and Methods: The study was conducted at the University Dental Clinic Centre in Skopje and random samples of 150 patients aged between 20-60 years. Were included 3108 teeth, 623 teeth has denticles. The X-ray assessment of the jaws was being made by subjecting the suspected teeth to panoramic X-ray. Statistically computer analysis was confirmed to the 623 teeth. Results: The results obtained from the carried out examinations showed that: 328 teeth (52,6%) – left side, 295 (47,3%) – right side, in maxilla and mandible.  $Z = 1.728$ ;  $P = 0.084$ . With statistically computer analysis was confirmed that the variation is not significant. Conclusion: From these results can be to conclude that the incidence of the pulp stones, according to the side is not significant.

**Keywords:** pulp stones, prevalence, the side, random samples, panoramic x-ray, statistically computer analysis

## 1. Introduction

Pulp stones can be cause from difficulties in diagnosing, and also be the reason for groundless extraction of a tooth or a group of teeth. Robertson A. et all, examined the prevalence of calcifications in the pulp of traumatized deciduous incisive teeth. 54 % of the cases were with a diagnosis of intrusion and luxation. In 41% of the examined teeth i.e. in 123 teeth, prevalence of denticles was discovered [1].

Ranjitkar S. Et all, concluded that denticles as discreet calcified bodies in the dental pulp might be related to the tooth type, as well as with the dental gum. Their analyses showed a smaller prevalence of calcifications in the premolars (0.4%), compared to the molars (19.7%), which is a significant difference [2].

More examinations on the dental pulp were made, showing that the denticles also occur in the pulp of deciduous teeth. Such examinations were made on behalf of Stajer Al, Kokai LE who managed to discover denticles in many teeth of a twelve-year old girl. According to them, reason for this could be various etiological factors. However, they consider these to be pain provocateurs [3].

Kumar S, Mathur RM, Chandra S, Jaiswal JN. examined and made in-depth analysis of the phenomenon and the nature of calcification in the pulp of 120 deciduous teeth extracted from the maxilla and the mandibula. In 31 teeth there were identified calcifications in the dental pulp of the following two kinds: denticles and diffuse calcifications. Calcification had identical prevalence in all teeth, except in the first deciduous molar [4].

They are identified to appear in both the dentitions (deciduous and permanent), but also in impact teeth, these

findings were supported by Nitzan and his associates in year 1986 [5].

Holtgrave EA, Hopfenmuller W, Ammar S., came to a conclusion that the long-term use of fluor leads to appearance of calcifications in the pulp of deciduous teeth. These findings resulted from the examinations made on children who were subjected to fluor treatment, and those who were not subjected to any prevention therapy. Statistical indicators of these examinations showed a significant difference ( $p = 0.001$ ) between the examined groups subjected to fluor therapy [6].

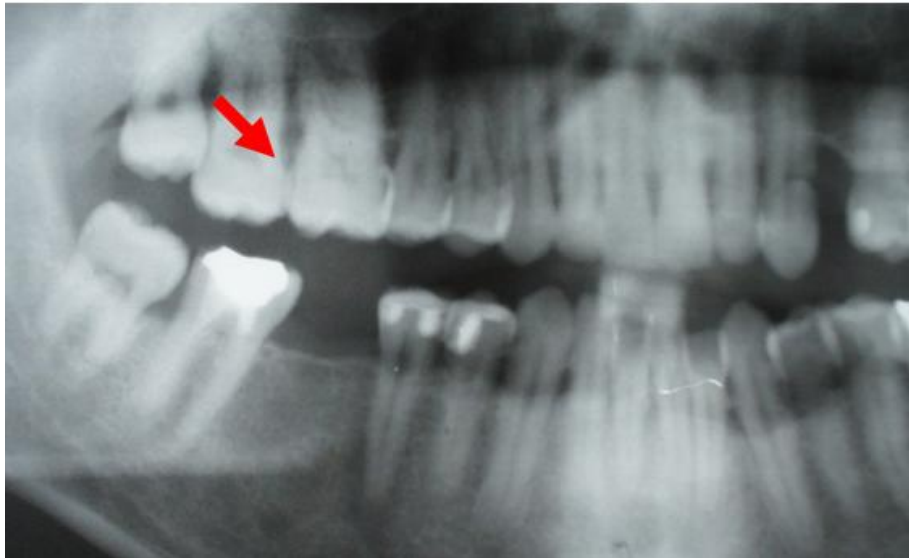
## 2. Materials and Methods

The study was conducted at the University Dental Clinic Centre "St. Pantelejmon" in Skopje. 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 X-ray, 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 teeth has denticles. Statistically computer analysis was confirmed to the 623 teeth.

The results obtained by application of roentgenologically and statistically methods.

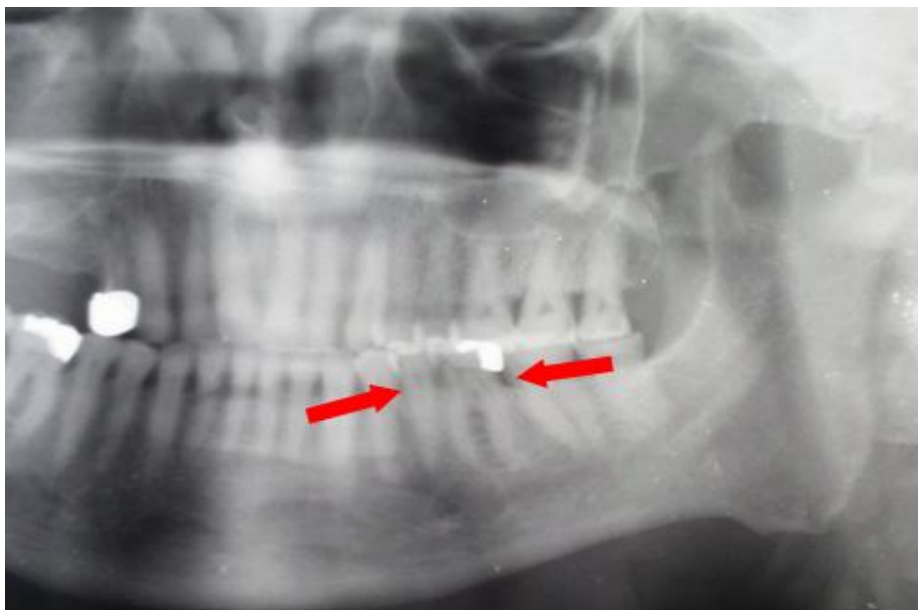
## 3. Results and Discussion



**Figure 1:** Pulp stone in upper right first molar



**Figure 2:** Pulp stone in lower right first molar



**Figure 3:** Pulp stone in lower left first and second molars

Out of 3108 analyzed teeth with denticles, 623 teeth were with pulp stones.

From 623 teeth with denticles: - 328 teeth (52,6%) – left side, 295 (47,3%) – right side, in maxilla and in mandible.

- 328 teeth (52,6%) - left side
- 295 teeth (47,3%) - right side

**--- Comparison of two proportion ---**

**Group 1 n = 623 26 p = 0.526**

**Group 2 n = 623 26 p = 0.473**

**The variation is: - 0.053**

**Standard deviation of the variation: 0.02965**

**95% secure interval in the variation: - 0.005118 to 0.1111**

**Z = 1.728; P = 0.084**

**The variation is not significant.**

In the literature data there is no lack of presentations of separate descriptions of dental calcifications, from all actual aspects (etiological, histological, statistical examinations). The studies are not in a large number, which gives space for further tries to define and make clarifications regarding this dental entity that is prevalent in everyday casuistics, but does not appear to be always detected.

With respect to the so-far made analyses and literature findings, which mainly refer to, and considering the presence of the continuous expansion of techniques and ways of monitoring certain pathological conditions, of the dental pulp, this study paper provides a relevant evidence about the frequency of stones in the pulp according to the side.

With this study made is a try to use the epidemiologically processed data in the clinical assessment and prophylaxes. The prevalence of pulp stones regarding the side showed that pulp stones are prevalent of the left side with 52,6% (which is visible in Figure 3), and they are also prevalent with 47,3% (Figures 1 and 2) in the maxilla and mandible. Some investigators have reported that pulp stones were more common in females than in males [6,7,8,9,10,11].

#### 4. Conclusion

Through part of the x-ray images in the material presented in this study paper, this general conclusion is that prevalence of pulp stones according to the side is not significant.

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