

原文題目(出處)：	Periapical lesions are not always a sequelae of pulpal necrosis: a retrospective study of 1521 biopsies. Int Endod J 2015;48:68-73
原文作者姓名：	Kontogiannis TG, Tosios KI, Kerezoudis NP, S. Krithinakis, Christopoulos P, Sklavounou A
通訊作者學校：	Department of Endodontics, Dental School, University of Athens, Athens; Department of Oral Pathology and Medicine, Dental School, University of Athens, Athens, Greece
報告者姓名(組別)：	施柏任 Intern J 組
報告日期：	104/5/12

內文：

■ Introduction

- Sequelae of pulpal necrosis (SPN) : periapical abscess, periapical granuloma or periapical cyst
- A review of the literature reveals that a wide variety of lesions may mimic a SPN
- Noninflammatory developmental odontogenic cysts, such as odontogenic keratocyst (OKC), nasopalatine duct cyst, lateral periodontal cyst and traumatic bone cyst
- Infectious diseases, such as histoplasmosis, aspergillosis, actinomycosis and viral diseases
- Benign fibro-osseous lesions
- Central giant-cell granuloma (CGCG)
- Odontogenic tumours, such as ameloblastoma
- Malignancies such as metastatic neoplasms, adenocarcinomas, lymphomas and odontogenic carcinoma.
- The incidence of non-SPN lesions amongst 1521 biopsies of periapical lesions submitted with a clinical diagnosis of a SPN.

■ Materials and methods

- 1521 biopsy with a clinical diagnosis 'periapical inflammation', 'periapical abscess', 'periapical granuloma' or 'periapical cyst'.
- Department of Oral Pathology and Medicine, Dental School, University of Athens
- January 1990 to December 2004 . 14-year period
- The exact type of surgical procedure used to retrieve the specimen (tooth extraction, periapical curettage or apicectomy) was not stated
- Cases submitted as 'periapical lesion', 'cyst' or 'odontogenic cyst' were excluded from the study.
- Gender and age of the patient, site and maximum diameter of the lesion, symptoms, inclusion of the final diagnosis in the differential diagnosis and specialty of the clinician submitting the biopsy material
- Two groups were formed, SPN and non- SPN lesions.
- For non-SPN lesions, the diagnoses were verified by reviewing the original slides

■ Results

- Periapical abscess in five cases (0.32%)
- Periapical granulomas in 476 cases (31.28%)
- Radicular cyst in 988 cases (64.91%)
- Various non-SPN lesions in 52 cases (3.42%)
- Table 1 shows the main clinical features of the SPN and non-SPN cases studied
- Average age of the patients ($P < 0.01$), the average maximum diameter of the

- lesion ($P < 0.01$) and the presence of symptoms ($P < 0.01$)
- The final diagnoses of non-SPN lesions are shown in Table 2
 - Developmental cysts (75.01%)
 - Odontogenic tumours (3.84%)
 - Other lesions (21.15%)
 - OKC was the final diagnosis in 18 of 52 non-SPN cases (34.62%).
 - The distribution of cases diagnosed per specialty of the submitting clinician is shown in Table 3.
 - Most SPN cases (80.41%) and almost all non-SPN cases were submitted by OMFS.
- Discussion
- Odontogenic keratocyst is the lesion most commonly mimicking a SPN.
 - OKC has an aggressive biological behaviour, with local infiltrative growth and a high tendency for recurrence
 - A high frequency of recurrence has, also, been reported for lateral periodontal cyst/botryoid odontogenic cyst, as well as glandular odontogenic cyst.
 - Fibro-osseous lesions were the second most common group of non-SPN lesions in the present study.
 - Most of them were consistent with periapical osseous dysplasias.
 - Metastatic carcinomas may imitate a SPN, Lung and breast were the most common primary sites, and there was a predilection for the posterior mandible.
 - Most periapical biopsies and non-SPN cases were submitted by OMFS, followed by GPs and endodontists.
 - As GPs do not usually perform endodontic surgery and refer patients to OMFS or endodontists, it is possible that those cases represent tissue curetted from the tooth socket after an extraction.
 - The most possible explanation for the limited number of cases submitted by endodontists is that they feel confident in their provisional diagnosis, as they routinely perform all proper diagnostic procedures
 - OMFS are trained to consider submission of any tissue removed from the oral and maxillofacial region for pathologic examination.
 - Non-SPN cases were larger than SPN lesions and large lesions are usually referred for management to OMFs.
- Conclusion
- Non-SPN lesions may appear in periapical regions mimicking a SPN, although rarely.
 - Most of them are developmental cysts, in particular OKCs
 - odontogenic tumours, such as ameloblastoma or malignant lesions may also be found
 - Histopathological examination of tissue harvested from periapical lesions should be performed, in particular when those lesions are large.

Table 1 Main clinical features of SPN and non-SPN cases

	SPN	Non-SPN	<i>P</i>
Gender			
Males	830	30	
Females	636	22	0.89
Ratio	1.3 : 1	1.3 : 1	
Average age (years)	41.34 ± 15.03	47.29 ± 18.78	0.0043
Region			
Maxilla	917	28	
Mandible	505	22	0.20
Ratio	1.82 : 1	1.22 : 1	
Average maximum diameter (cm)	1.92 ± 1.27	2.55 ± 1.69	0.00005
Symptoms			
Yes	922	31	
No	219	21	0.00055

SPN, sequelae of pulpal necrosis.

P-values of statistically significant differences are in bold.

Table 2 Final diagnosis in 52 cases of nonsequelae of pulpal necrosis lesions

Final diagnosis	Number of cases	%
Developmental odontogenic cysts		
Odontogenic keratocyst	18	34.62
Glandular odontogenic cyst	10	19.23
Lateral periodontal cyst or botryoid odontogenic cyst	6	11.54
Calcifying odontogenic cyst	3	5.77
Dentigerous cyst	2	3.85
Odontogenic tumours		
Ameloblastoma	1	1.92
Ameloblastic odontoma	1	1.92
Other lesions		
Fibro-osseous lesion—central ossifying fibroma	4	7.69
Foreign body reaction	2	3.85
Actinomycosis	1	1.92
Focal osteoporotic marrow defect	1	1.92
Metastatic carcinoma	1	1.92
Langerhans cell histiocytosis	1	1.92
Dental follicle	1	1.92
Total	52	100

Table 3 Total number of cases and non-SPN cases by specialty of the submitting clinician

	Total number of cases	%	Non-SPN cases	%
OMFS	1223	80.41	51	4.17
GPs	275	18.08	1	0.36
Endodontists	24	1.58	0	0
Total	1521	100	52	3.42

OMFS, oral/oral and maxillofacial surgeons; GPs, general practitioners; SPN, sequelae of pulpal necrosis.

題號	題目
1	下列有關 OKC(Odontogenic Keratocyst)敘述,何者錯誤? (A) 又叫做 Keratocystic odontogenic tumour (B) 25%~40% 包裹著一個 impacted tooth (C) 與 Gorlin syndrome 有關 (D) 最常發生在上顎
答案(D)	出處: LMarch 口腔病理學整理 Ver.3.1 p297,p298
題號	題目
2	下列有關 periapical cemental dysplasia 敘述,何者錯誤? (A) 多發生在下顎前牙根尖處 (B) 好發女性 (C) 好發年齡在 30~50 歲 (D) 牙齒活性為 negative
答案(D)	出處: LMarch 口腔病理學整理 Ver.3.1 p279,p280