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### Recommended Citation

Liang, Hsin-Yang and Chiang, Chun-Pin () "Dentigerous cysts occurring in three middle-aged male patients," *Journal of Dental Sciences*: Vol. 21: Iss. 2, Article 87.

Available at: <https://jds.ads.org.tw/journal/vol21/iss2/87>

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### KEYWORDS

Dentigerous cyst;  
Middle-aged patient;  
Male;  
Mandible

Dentigerous cyst (DC) is the most common type of developmental odontogenic cyst.<sup>1</sup> DCs most frequently involve the mandibular third molars, accounting for approximately 45–65 % of all DC cases.<sup>1,2</sup> They are discovered most commonly in patients between 10 and 29 years of age (approximately 41 %) and are relatively less frequently found in patients between 40 and 49 years of age (approximately 13 %). In this article, we presented three DC cases occurring in patients between 45 and 49 years of age and all three DC cases involved the impacted mandibular third molars.

The first DC case occurred in a 49-year-old male patient without any systemic diseases. He was found to have fully bony impacted teeth 38 and 48 by the panoramic radiography in January, 2021 (Fig. 1A). On October 15, 2024, a well-defined cystic lesion surrounding the whole crown of tooth 38 was discovered by the routine panoramic radiography (Fig. 1B). Odontectomy and cyst enucleation were performed under general anesthesia. The soft tissue specimen was sent for histopathological examination and was further confirmed to be a DC. The patient recovered well after odontectomy and cyst enucleation.

The second DC case occurred in a 46-year-old male patient with poorly-controlled diabetes mellitus. He presented to our dental outpatient department with pain in the right maxillary posterior region. Intraoral examination revealed severe mobility of tooth 17. The panoramic radiography showed periodontal destruction of tooth 17 and a well-defined cystic lesion with a corticated border around the crown of tooth 48 (Fig. 1C). After discussion with the

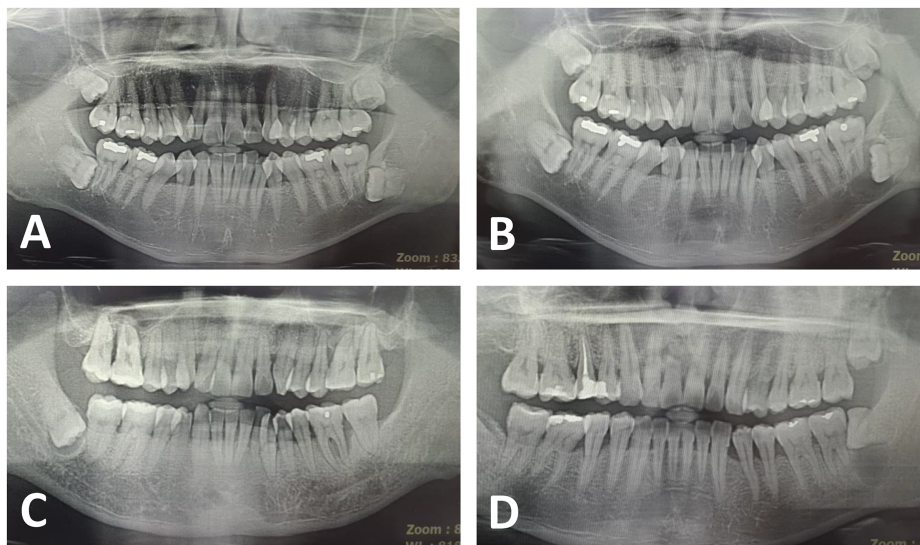
patient, odontectomy of tooth 48 was performed under general anesthesia. The soft tissue specimen was sent for histopathological examination and was further confirmed to be a DC.

The third DC case was found in a 45-year-old male patient who visited our outpatient department in January, 2025 due to severe pain in the left mandibular posterior gingiva. Intraoral examination revealed a partially-erupted tooth 38 with pericoronitis and pus discharge. The panoramic radiography demonstrated a less well-defined cystic lesion below the crown of partially-erupted tooth 38 (Fig. 1D). Odontectomy and cyst enucleation were performed and antibiotics were prescribed to the patient for one week to cover the bacterial infection. This treatment modality resulted in relief of the patient's signs and symptoms. The soft tissue specimen sent for histopathologic examination was confirmed to be an infected DC.

The pathogenesis of the DC is uncertain. However, the DC apparently develops by accumulation of fluid between the reduced enamel epithelium and the tooth crown. Radiographically, the DC typically shows a unilocular radiolucent lesion surrounding the whole crown of an unerupted tooth (so-called central DC, such as the radiolucent lesions of the first and second cases). The radiolucency usually has a well-defined and often corticated border. Moreover, the DC may exhibit a radiolucent lesion lateral to or along one side of the crown and the root (so-called lateral DC, such as the radiolucent lesion of the third case). When the lateral DC is infected by bacteria like the situation in our third case, the radiolucent lesion becomes

<https://doi.org/10.1016/j.jds.2025.12.016>

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**Figure 1** The panoramic radiographs of our three cases of dentigerous cyst (DC) occurring in patients between 45 and 49 years of age. (A) The panoramic radiograph of a 49-year-old male patient (the first case) showing fully bony impacted teeth 38 and 48 in January, 2021. (B) The panoramic radiograph of the first case taken 3 years and 9 months later revealing a well-defined cystic lesion (a central DC) surrounding the crown of tooth 38. (C) The panoramic radiograph of a 46-year-old male patient (the second case) exhibiting periodontal destruction of tooth 17 and a well-defined cystic lesion (a central DC) with a corticated border around the crown of tooth 48. (D) The panoramic radiograph of a 45-year-old male patient (the third case) demonstrating a less well-defined cystic lesion below the crown of partially-erupted tooth 38.

relatively less well-defined. In addition, when the DC presents itself like a swimming ring around the cervical area of the tooth, it is called the circumferential DC.<sup>1</sup>

In the present study, all three DC cases involved the impacted mandibular third molars. Our previous study of the clinicopathological features of 338 DCs in 332 Taiwanese patients also demonstrated that the mandibular third molar (153 cases or 45.3 %) is the most commonly involved tooth, followed by the supernumerary teeth (46 cases or 13.6 %) and the maxillary canine (38 cases or 11.2 %). In addition, the DCs occur more frequently in patients below 40 years of age (62.8 %) than in patients above 40 years of age (37.2 %). Only 44 patients (13.1 %) are found in patients between 40 and 49 years of age.<sup>2</sup> Therefore, the DCs occurring in patients between 40 and 49 years of age are relatively few (approximately 13 %).<sup>2</sup>

## Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

## Acknowledgments

None.

## References

1. Neville BW, Damm DD, Allen CM, Chi AC. Odontogenic cysts and tumors. In: Neville BW, Damm DD, Allen CM, Chi AC, eds. *Oral and maxillofacial pathology*, 5th ed. St Louis: Elsevier, 2024: 685–8.

2. Lin HP, Wang YP, Chen HM, Cheng SJ, Sun A, Chiang CP. A clinicopathological study of 338 dentigerous cysts. *J Oral Pathol Med* 2013;42:462–7.

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Received 11 December 2025  
Available online 1 April 2026