

中文題目：以慢性咳嗽為表現之氣管憩室

英文題目：Tracheal Diverticulum in a patient with chronic cough

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**Background:** Tracheal diverticulum was a rare anomaly of trachea and often found incidentally. It may be congenital or acquired. Most are asymptomatic and found incidentally. However, chronic cough may happen due to infected trachea bronchitis. Herein, we presented one female patient with tracheal diverticulum had manifestation of chronic cough.

**Case presentation:** A 52-year-old female patient visited our out-patient department due to chronic cough over 3 months. Little whitish sputum production was told. She denied neither smoking history nor dyspnea sensation. Physical examination of breathing sound was clear over bilateral lung fields. Not fever episode was noted. Initial chest radiograph (CXR) did not show active lesion. The symptom could be subsided by medication but relapsed after medication stop. Follow-up CXR also revealed not significant abnormality after 1 month interval. The hemogram was within normal range and not leukocytosis was found. Pulmonary function test was done and it showed normal screen spirometry and negative provocation test. Because of chronic refractory cough, chest computed tomography (CT) was arranged. The CT revealed clear lung fields but an air filled structure on the right side area of the trachea was also found. (Fig) Tracheal diverticulum was diagnosed.

**Discussion:** The tracheal diverticulum was usually asymptomatic and found in the postmortem examination incidentally. It was ever reported around 1% of patients in an autopsy series. The congenital type might arise 4 to 5 cm below the true vocal cords on the right side of trachea. It was often small and narrow-mouthed. The wall of the congenital diverticulum was similar to the tracheal wall and it might occur with other congenital tracheobronchial tree anomalies. The acquired type was thought to an out bulging at the weak point in the tracheal wall due to increased intraluminal pressure, such as chronic cough. Acquired tracheal diverticulum was often wide-mouthed and larger than congenital type. It was often lined by respiratory epithelium but no mucous glands nor cartilage in the wall.

The tracheal diverticulum could result in secretion retention and chronic cough could happen secondary to infections of the tracheobronchial trees. It can be treated by surgical resection or conservatively by antibiotics or physiotherapy. The diagnosis

of tracheal diverticulum can be made from radiographic examination. It is an air tubular structure which often found on the right side of the trachea. It was not easy to find the paratracheal air cysts from traditional CXR. On respiratory dynamic CT, the diverticulum might expand while forced expiration and shrink while inspiration.

**Conclusion:** There are a lot of differential diagnoses of chronic cough. This rare anomaly might complicate the physician initial approach. CT was a tool to help the diagnosis.