原文題目(出處)：	Investigation of the incidence of stylohyoid ligament calcifications with panoramic radiographs Journal of Investigative and Clinical Dentistry 2012;3:30-35.
原文作者姓名：	Oztas B & Orhan K
通訊作者學校：	Department of Oral Diagnosis and Radioalogy, Faculty of Dentistry, Ankara University, Besevler, Ankar, Turkey
報告者姓名(組別)：	陳依涵 Intern B組
報告日期：	101/10/09

內文：

I. Abstract:

1. Aim

—Determine the incidence of different types of stylohyoid ligament calcification (SLC) using panoramic radiographs. In addition, it also assessed the possible causative symptoms and Eagle's syndrome in cases of stylohyoid process elongation

2. Methods

—2000 patients(1161females and 839 males), aged 3-88 years, who were treated at the clinic.

3. Results

—Revealed SLC in 1350 patients.(Type 1-345; Type 2-203; Type 3-418; Type 4-384)

4. Conclusion

--SLC was found to be higher in female patients when compared to male patients.And the incidence of calcification was found to increase with age.Finally, the incidence of calcified stylohyoid ligament is higher in patients with systemic diseases.

II. Introduction:

1. The stylohyoid apparatus consists of:

The stylohyoid process, the stylohyoid ligament, and the lesser horn of the hyoid bone

2. Etiology of the styloid process:

<1> Degeneration of the calcium salts in the fibrous tissue

<2> Malformation is the consequence of the direct ossification of the cartilaginous cells remaining in the ligament of adult patients

3. Diagnosis of SLC:

<1> Generally on panoramic radiographs

<2> Pain in the region of the tonsillar fossa after palpation (additional symptom)

4. Discrepancies:

Due to panoramic units,usage, as well as patient positioning

5. Image techeniques:

Panoramic radiography, posteroanterior skull view, lateral cephalogram, lateral oblique mandible view…etc

6. Lucke in 1870—the first describes the symptoms and the relative syndrome

7. Eagle—

<1> The first to provide a comprehensive description of the syndrome, linking it to the elongated styloid process (Eagle's syndrome)

<2> 4% of the population had SLC.And only 4% of these people showed syndrome
<3> The syndrome is reported more frequently in women than in men

8. Eagle's syndrome—

<1> Diagnosis—
[1] Palpation of the tonsillar fossa
[2] Temporary relief after local anesthesia infiltration
[3] Rradiographic findings that reveal SLC

<2> Symptoms—
[1] Dysphagia
[2] Foreign body sensation
[3] Troat pain
[4] Ipsilateral otalgia
[5] Headache
[6] Neck pain during rotation
[7] Pain during tongue extension
[8] Facial and carotid pain

9. Two possible expressions of the syndrome-
Classical Stylohyoid Syndrome v.s.Stylocarotid Syndrome

<1> Classical Stylohyoid Syndrome
[1] After tonsillectomy
[2] Dull and persistent pharyngeal pain, especially in the tonsillar fossa, with radiation to the ipsilateral ear

<2> Stylocarotid Syndrome
[1] Not correlated with tonsillectomy
[2] Ooccurs whenever the stylohyoid apparatus compresses the internal and/or external carotid apparatus

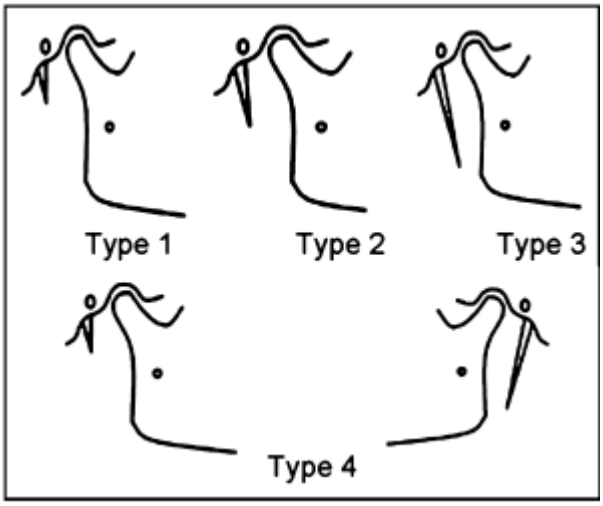
10. Treatment of Eagle's syndrome:
Surgically, as well as non-surgically

<1> Non-surgically:pharmacological approach by anesthetics in the tonsillar fossa
<2> Surgically:styloidectomy

II. Materials and Methods:

1. Consisted of 2000 patients (1161 females and 839 males)
2. The routine-taken panoramic radiographs following clinical examination were evaluated by the same radiologist
3. **Classification model:**
"O'Carroll and Jackson classification"

<1> Type 1:SLC is higher than mandibular foramen (bilateral)
<2> Type 2:SLC is aligned with mandibular foramen (bilateral)
<3> Type 3:SLC is lower than mandibular foramen (bilateral)
<4> Type 4:SLC has different lengths for the left and the right sides of the patients



IV. Results:

1. SLC was observed in the panoramic radiographs of 1350 patients(of 2000 patients), including 792 females and 558 males
2. Type 1 Type 2 Type 3 Type 4
   17.2%: 10.1%: 20.3%: 19.2%
3. Eagle's syndrome was reported in only **two of the 2000 patients**
4. One case:
   [1] 42-year-old female with widespread pain on her maxilla
   [2] Medical history:hypertension and artrosis
   [3] Clinical examination:head and cervicofacial pain, painful neck movement, sensation of foreign body in the throat, otalgia. Palpation pain in the tonsillar fossa (confirmed the diagnosis of Eagle's syndrome)
   [4] Radiographic examination:type 4 SLC
   [5] Treatment:surgical removal of the elongated styloid process through an extraoral approach by otolaryngologist
   [6] 6 months f/u:free of symptoms

V. Discussion

1. Dentists have become aware of SLC because of the widespread use of panoramic radiographs
2. Normal styloid process length: 20-30 mm. Elongation means either the styloid process or the adjacent stylohyoid ligament ossification shows and overall length in excess of 30 mm
3. The prevalence of the styloid process elongation has been reported to be 4%.4% of these people have symptoms
4. The incidence of SLC increases with age
5. Rizatti-Barbosa *et al.*//Okabe *et al.*:
   >>an anatomical variant of the stylohyoid ligament complex was more frequent in the elderly female population
6. Camarda *et al.*:
   No statistically-significant difference between sex and the frequency of SLC in adolescent
7. SLC can be observed in every age group
8. It is important to note that and elongated styloid process does not necessarily signify Eagle's syndrome
9. Although SLC can be observed in every age group, the incidence of calcification increases with age

10. For the diagnosis of Eagle's syndrome, radiographs alone is inadequate. It is crucial that clinical diagnosis is also performed

題號	題目
1	Which is not the treatment of Eagle's syndrome (A) Anesthetics in the tonsillar fossa (B) Local injections of corticosteroids (C) Partial surgical excisions (D) Muscle massage
答案(D)	出處：Oral and Macillofacial Pathology, 3rd edition p.24
題號	題目
2	Which is not the synonyms of Eagle's syndrome? (A) Stylohyoid syndrome (B) Carotid artery syndrome (C) Condylar hyperplasia (D) Stylalgia
答案(C)	出處：Oral and Macillofacial Pathology, 3rd edition p.17-23