Cysts of the Oral Region

ODONTOGENIC CYSTS
Radicular (Periapical) Cyst
Dentigerous Cyst
Lateral Periodontal Cyst
Gingival Cyst of the Newborn
Odontogenic Keratocyst
Calcifying Odontogenic Cyst
NON-ODONTOGENIC CYSTS
"Globulomaxillary" Cyst
Nasolabial Cyst
Median Mandibular Cyst
Nasopalatine Canal Cyst
PSEUDOCYSTS
Aneurysmal Bone Cyst
Traumatic (Simple) Bone Cyst
Static Bone Cyst
Focal Osteoporotic Bone Marrow Defect

Odontogenic cysts

1. Primordial
2. Dentigerous
3. Multilocular
4. Radicular
5. Residual

y are included in this chapter.

ysts

Arise from enamel organ or follicle; th
lectively called *follicular cysts*

Arise from epithelial rests of Malassez

ic cysts

atine
eolar

Arise in area of fusion of facial

Nonodontogenic cysts

1. Median palatine
2. Median alveolar
3. Globulomaxillary
4. Nasoalveolar
5. Median mandibular
6. Nasopalatine

Arise in area of fusion of facial processes; therefore, collectively called *fissural cysts*

Arise from remnants of nasopalatine duct

eudocysts)

Nonepithelial "cysts" (pseudocysts)

1. Traumatic
2. Idiopathic bone cavity
3. Aneurysmal bone

le 13. Relative incidence of odontogenic cysts of jaw

Cyst type	Specimens	Cysts (%)
Primordial	62	1.75
Dentigerous	1,194	33.75
Eruption	19	0.54
Multilocular	4	0.11
Follicular (unclassified)	33	0.93
Radicular	2,046	57.83
Residual	180	5.09
Total	3,538	100.00

sed on personal analysis of clinical, roentgenologic, microscopic, and follow
a on more than 20,000 cases.

III. EPITHELIAL CYSTS

A. Developmental

1. Odontogenic
   a. Primordial cyst [keratocyst]
   b. Gingival cyst
   c. Eruption cyst
   d. Dentigerous [follicular] cyst
2. Non-odontogenic
   a. Naso-palatine duct [incisive canal] cyst
   b. Globulo-maxillary cyst
   c. Naso-labial [naso-alveolar] cyst

B. Inflammatory

1. Radicular cyst

Box 15-1 *Classification of Odontogenic Cysts*

DEVELOPMENTAL

1. Dentigerous cyst
2. Eruption cyst
3. Odontogenic keratocyst
4. Orthokeratinized odontogenic cyst
5. Gingival (alveolar) cyst of the newborn
6. Gingival cyst of the adult
7. Lateral periodontal cyst
8. Calcifying odontogenic cyst*
9. Glandular odontogenic cyst

INFLAMMATORY

1. Periapical (radicular) cyst
2. Residual periapical (radicular) cyst
3. Buccal bifurcation cyst

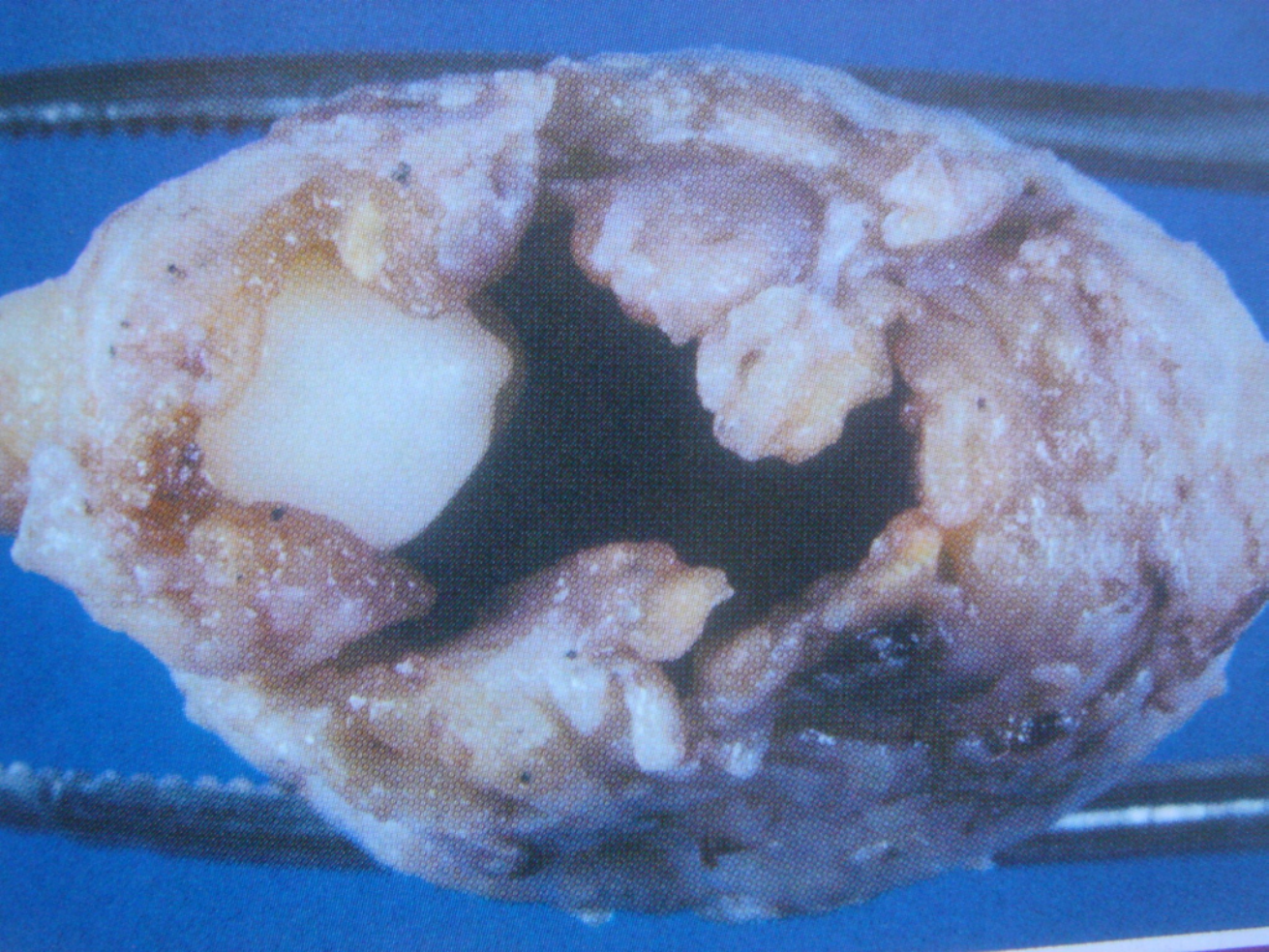
DEVELOPMENTAL CYSTS

Palatal Cysts of the Newborn
Nasolabial Cyst
"Globulomaxillary Cyst"
Nasopalatine Duct Cyst
Median Palatal Cyst
"Median Mandibular Cyst"
Epidermoid Cyst of the Skin
Dermoid Cyst
Thyroglossal Duct Cyst
Branchial Cleft Cyst
Oral Lymphoepithelial Cyst

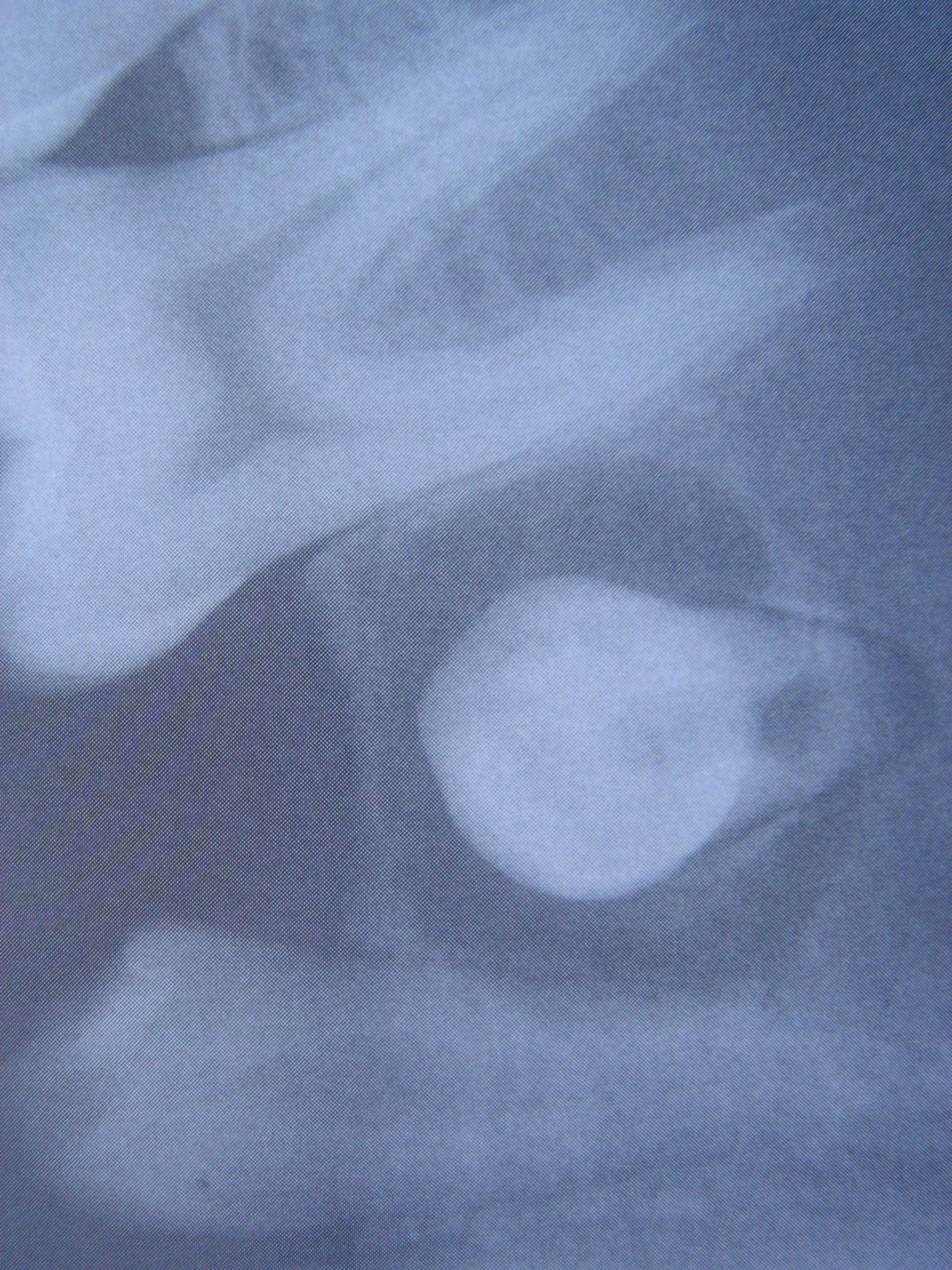
Odontogenic Cysts

With rare exceptions, epithelium-lined cysts in bone are seen only in the jaws. Other than a few cysts that may result from the inclusion of epithelium along embryonic lines of fusion, most jaw cysts are lined by epithelium that is derived from odontogenic epithelium. These are referred to as **odontogenic cysts.** (Nonodontogenic jaw cysts are discussed in Chapter 1.)

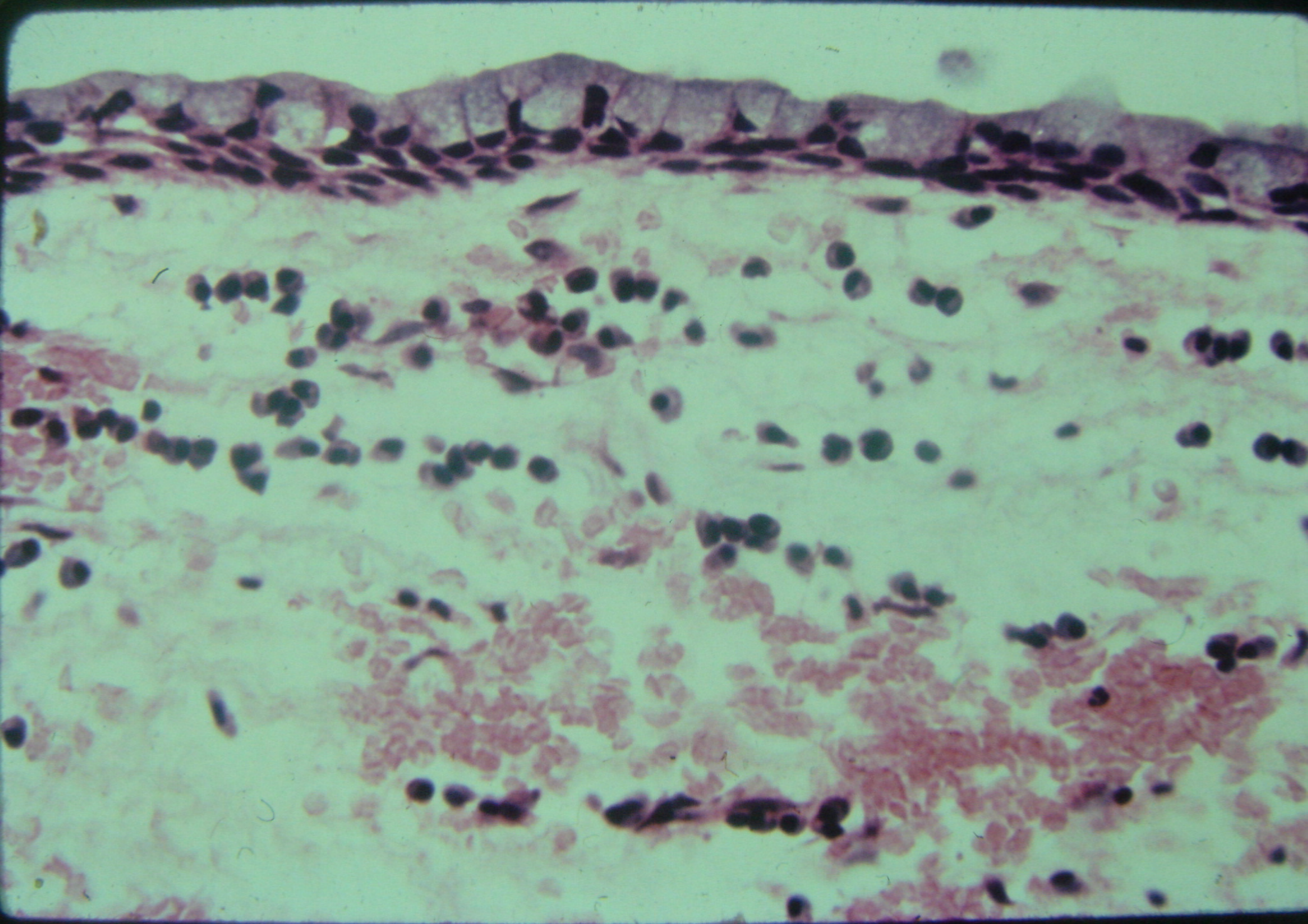
Odontogenic cysts are subclassified as developmental or inflammatory in origin. **Developmental cysts** are of unknown origin, but they do not appear to be the result of an inflammatory reaction. **Inflammatory cysts** are the result of inflammation. Box 15-1 presents categories of odontogenic cysts modified from the 1992 World Health Organization (WHO) classification. (The periapical cyst

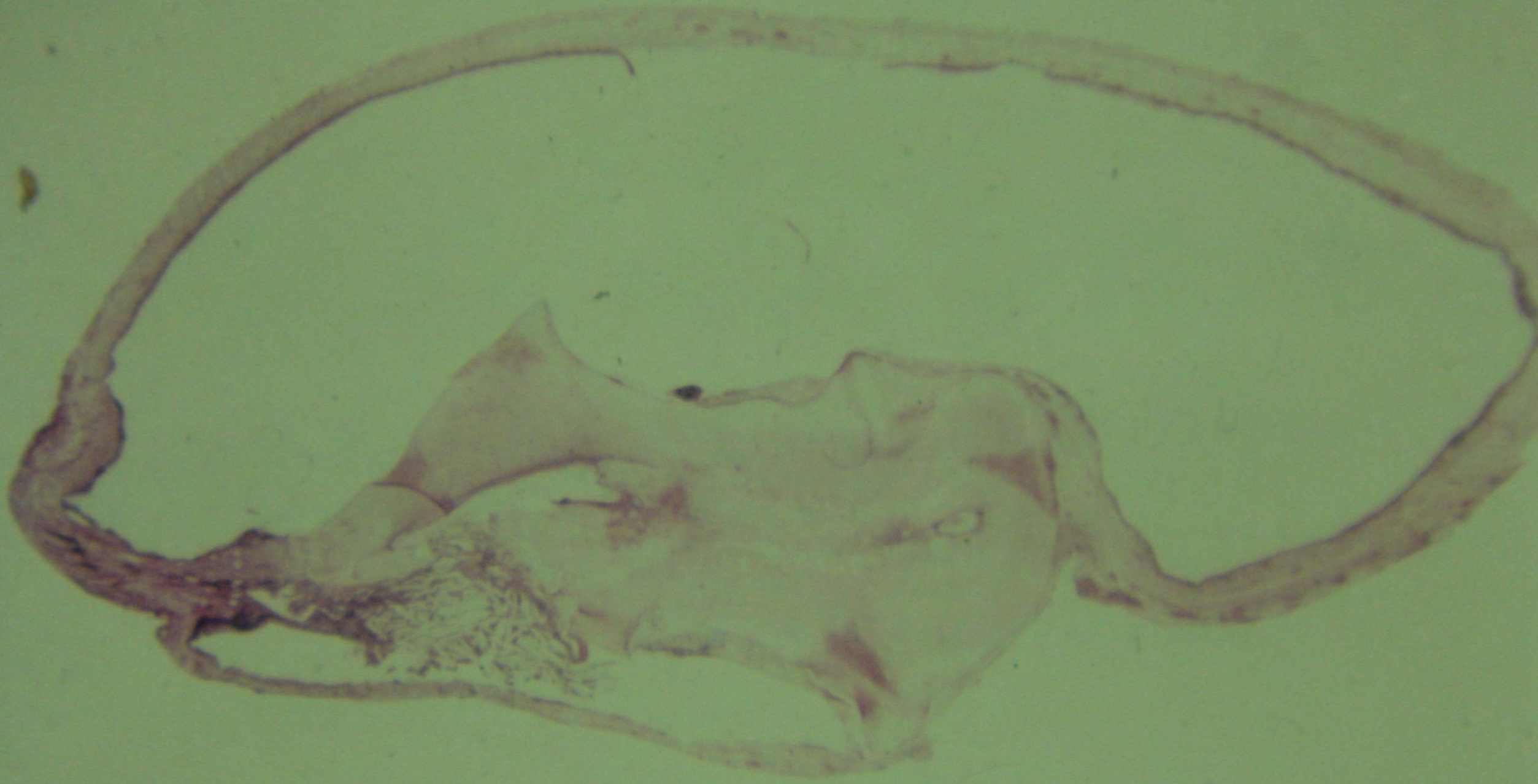


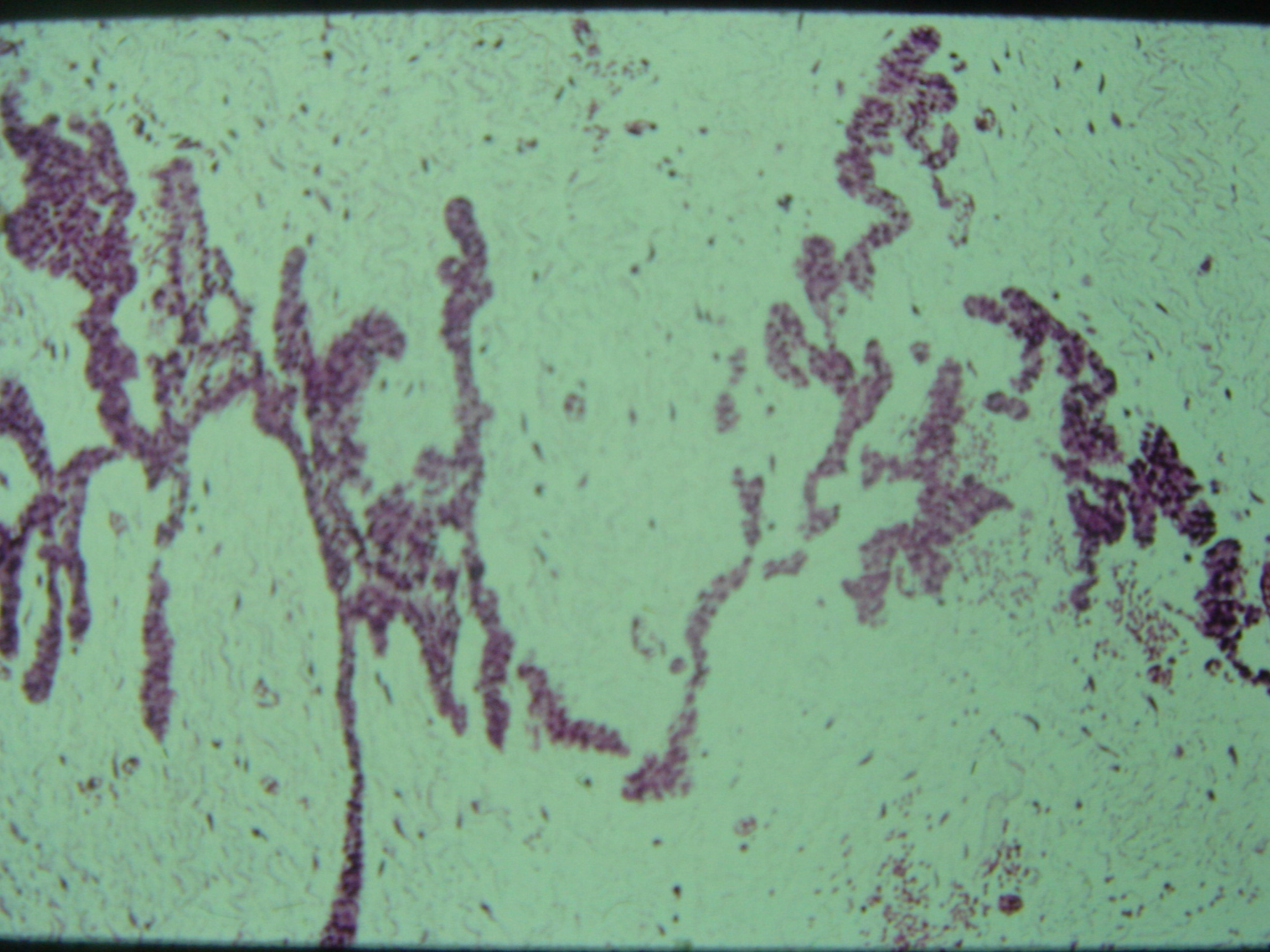


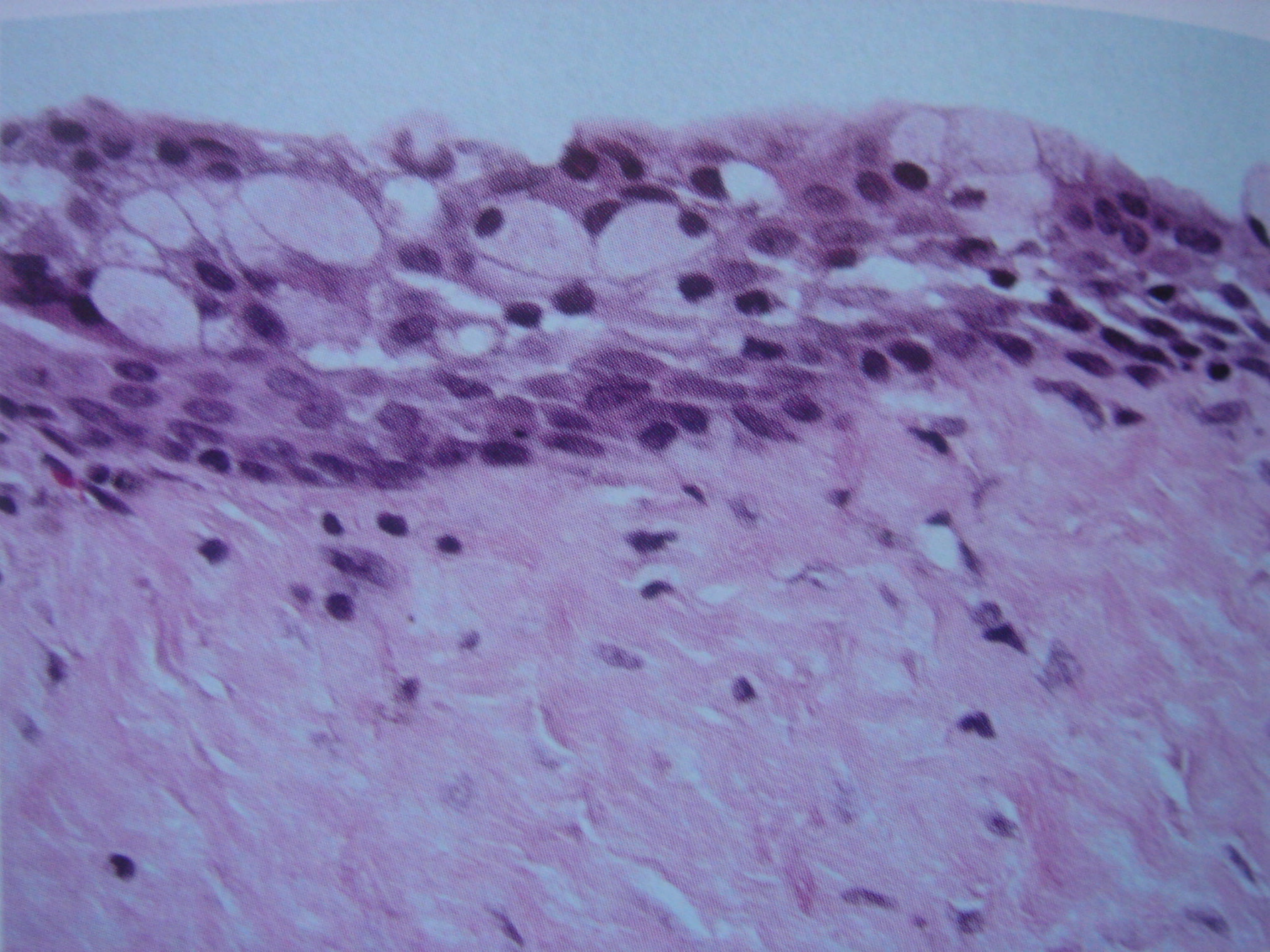












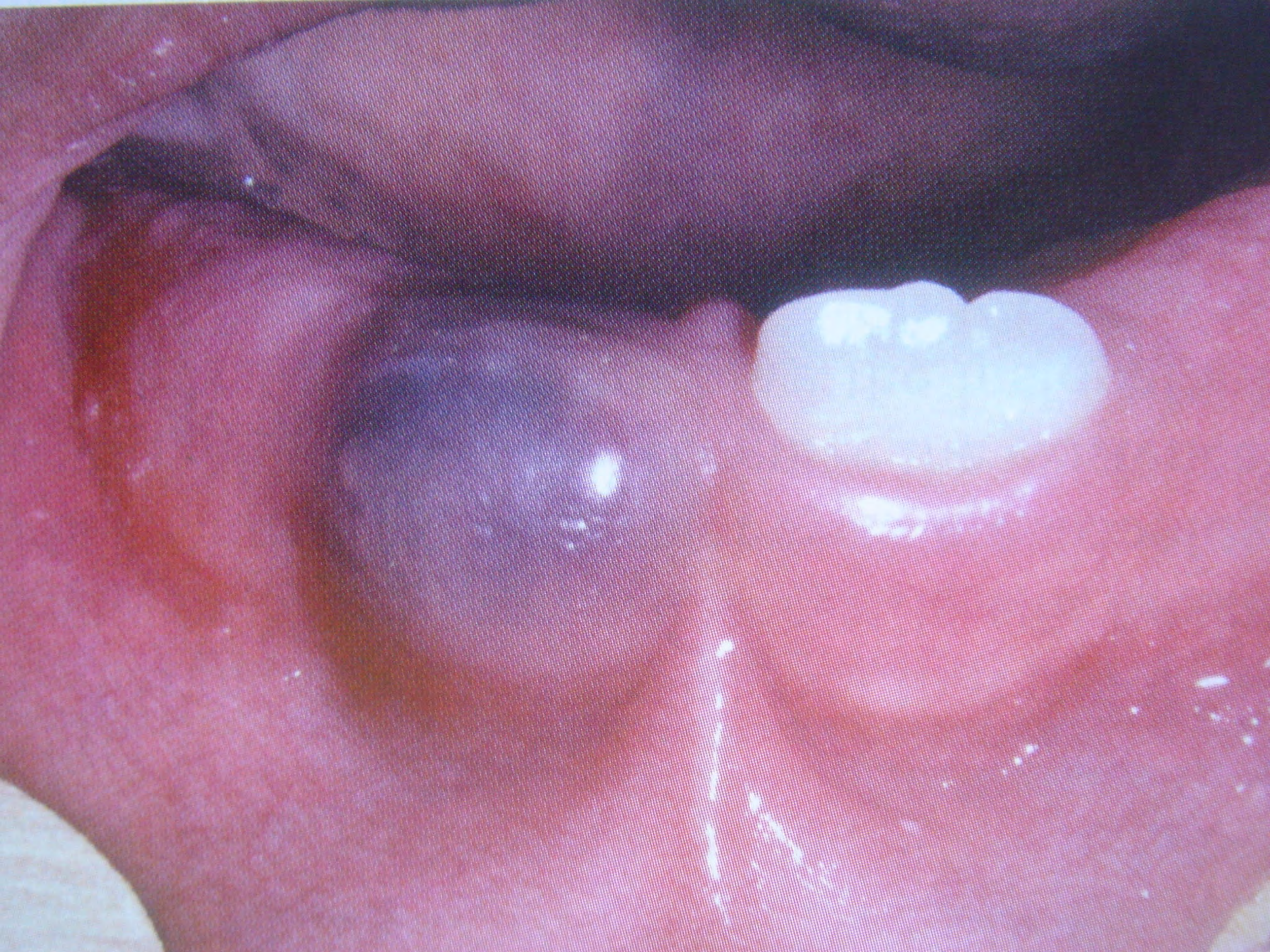
cinoma may arise in the lining of a dentigerous cyst (see page 609). It is likely that some **intraosseous mucoepidermoid carcinomas** (see page 422) develop from mucous cells in the lining of a dentigerous cyst.

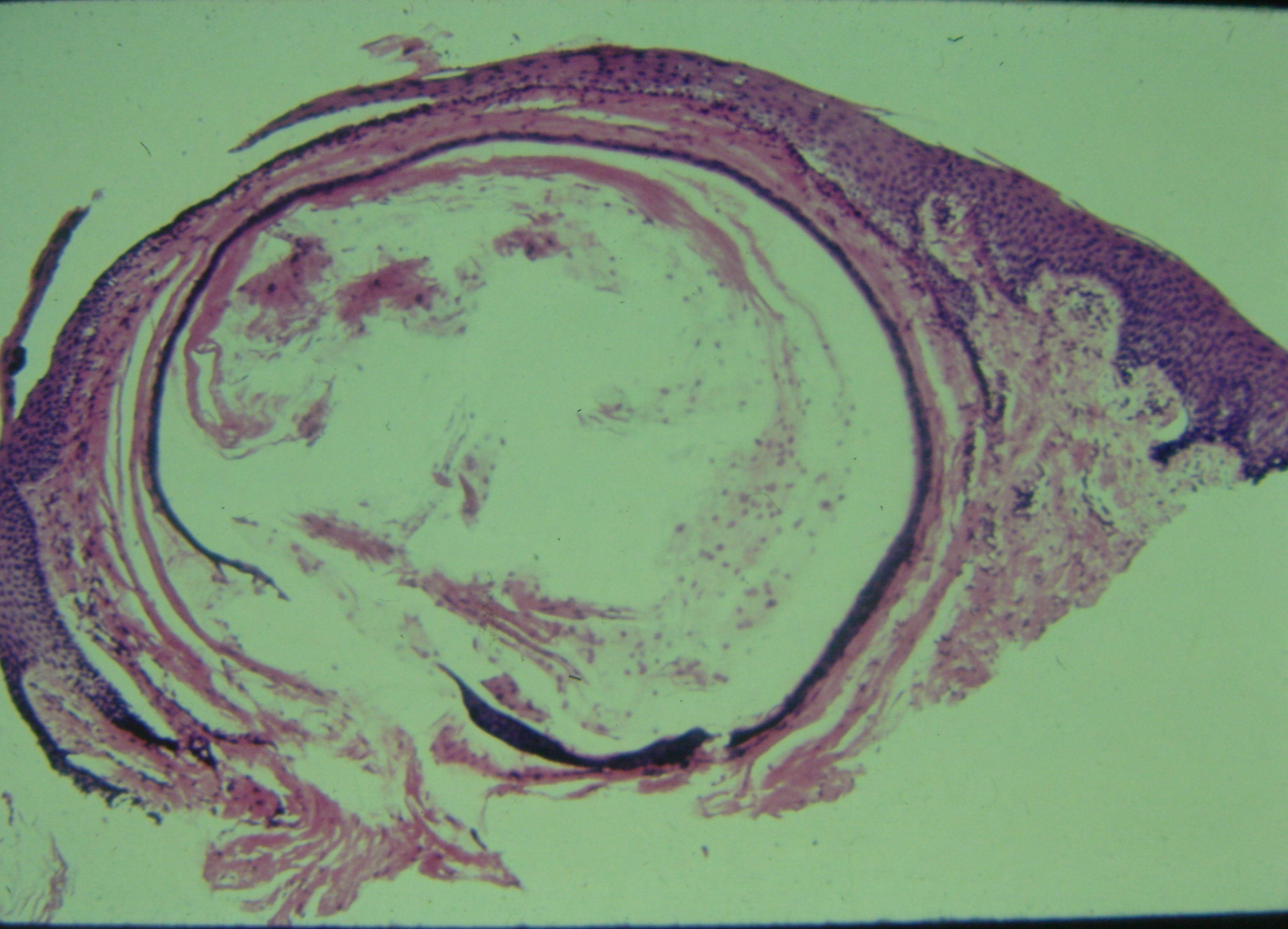
ERUPTION CYST (ERUPTION HEMATOMA)

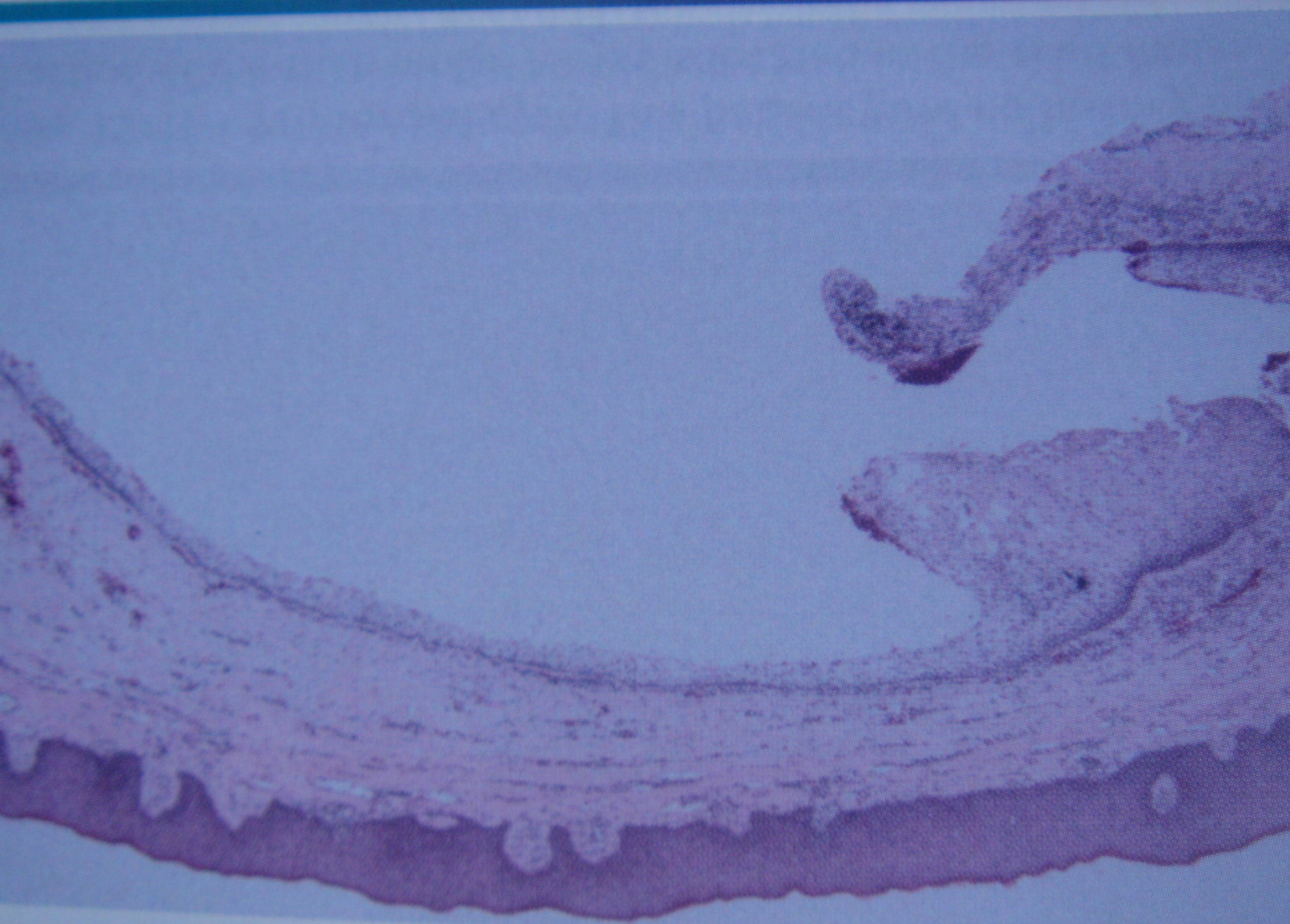
The **eruption cyst** is the soft tissue analogue of the dentigerous cyst. The cyst develops as a result of separation of the dental follicle from around the crown of an erupting tooth that is within the soft tissues overlying the alveolar bone.

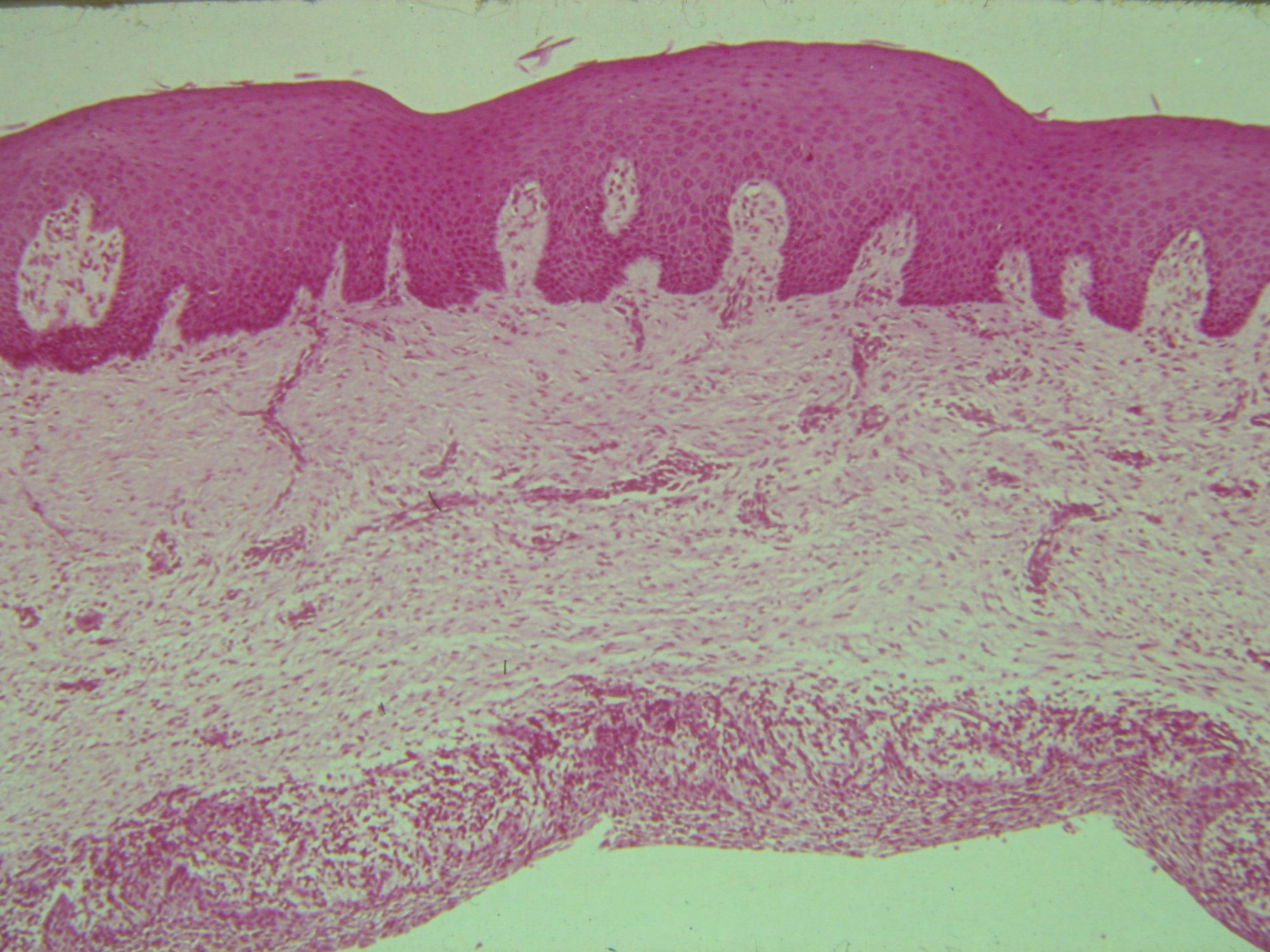
Clinical Features

The eruption cyst appears as a soft, often translucent swelling in the gingival mucosa overlying the crown of





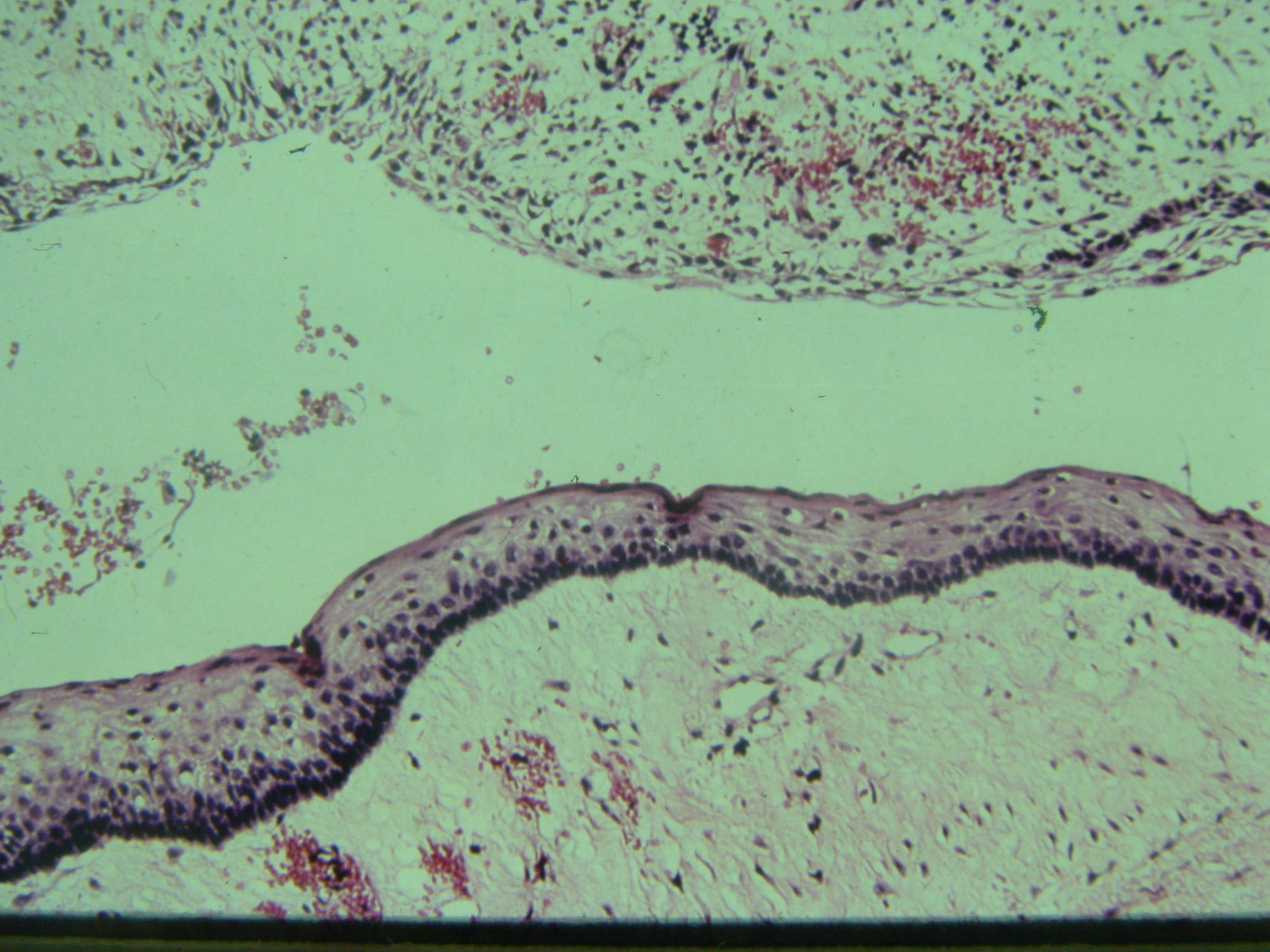




PRIMORDIAL CYST

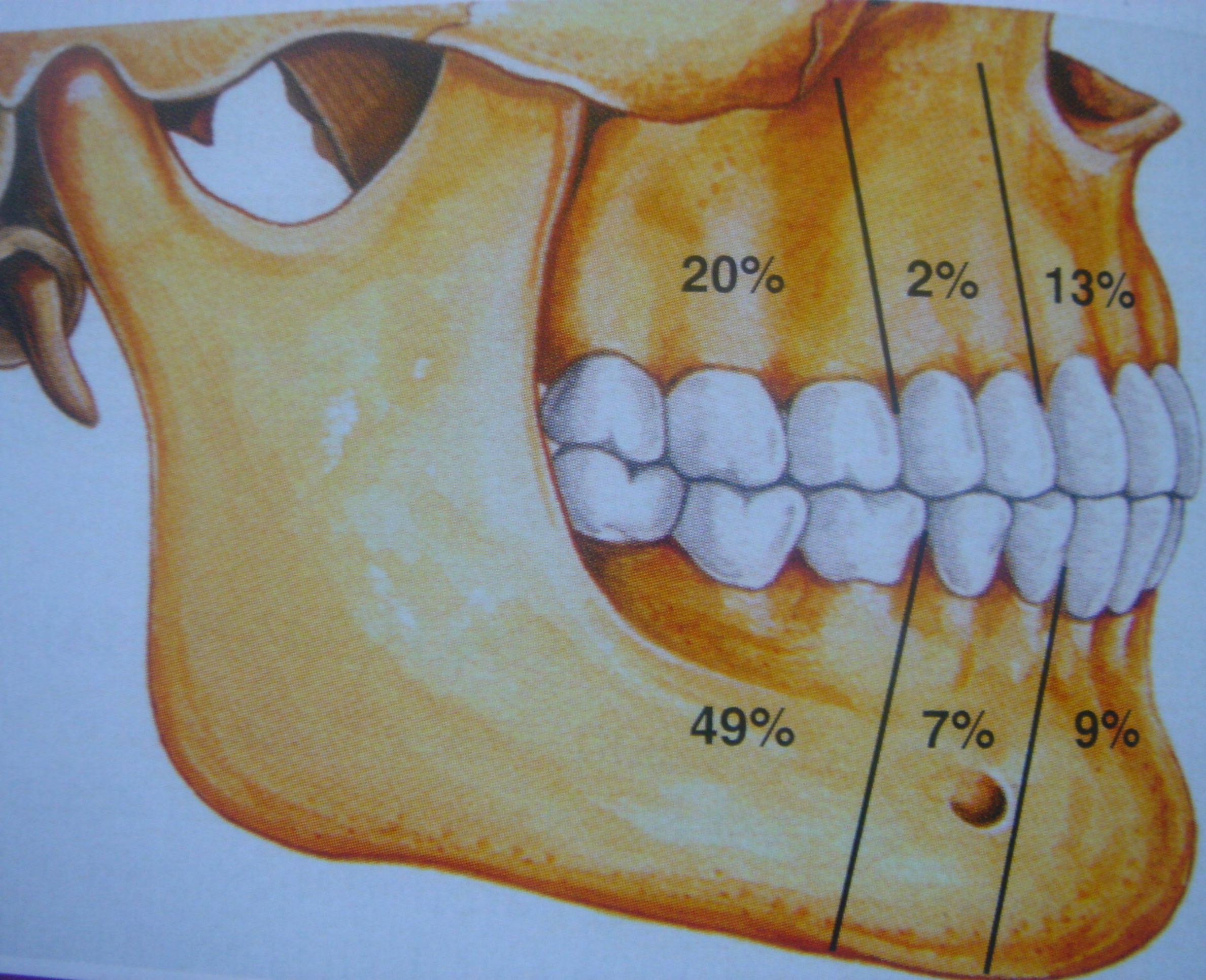
The concept and meaning of the term **primordial cyst** often have been controversial and confusing. In the older classification of cysts widely used in the United States, the primordial cyst was considered to originate from cystic degeneration of the enamel organ epithelium before the development of dental hard tissue. Therefore, the primordial cyst occurs in place of a tooth.

In the mid-1950s, oral pathologists in Europe introduced the term **odontogenic keratocyst** to denote a cyst with specific histopathologic features and clinical behavior, which was believed to arise from the dental lamina (i.e., the dental primordium). Subsequently, this concept was widely accepted, and the terms *odontogenic keratocyst* and *primordial cyst* were used synonymously.



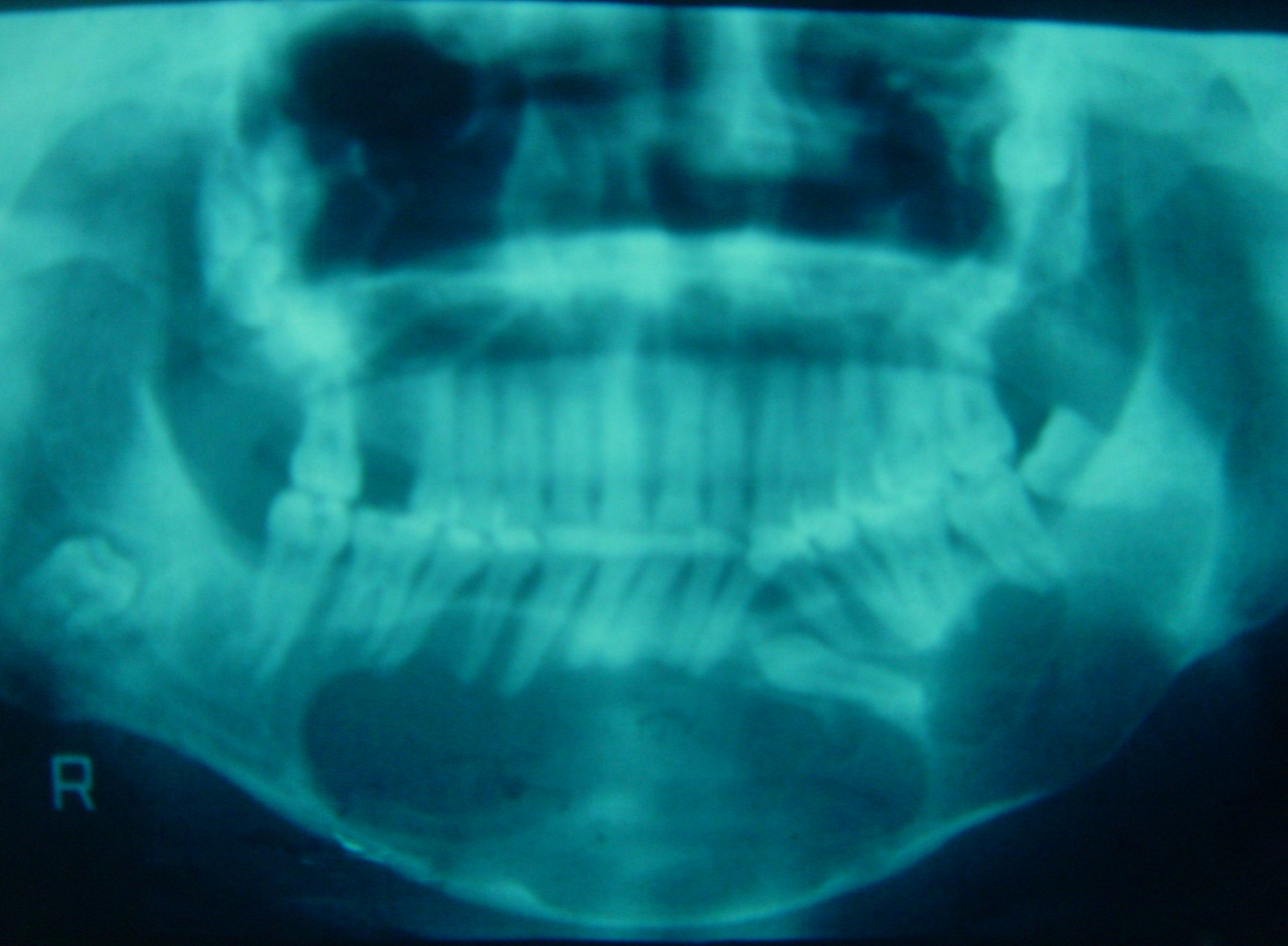
ODONTOGENIC KERATOCYST

The **odontogenic keratocyst** is a distinctive form of developmental odontogenic cyst that deserves special consideration because of its specific histopathologic features and clinical behavior. There is general agreement that the odontogenic keratocyst arises from cell rests of the dental lamina. This cyst shows a different growth mechanism and biologic behavior from the more common dentigerous cyst and radicular cyst. Most authors believe that dentigerous and radicular cysts continue to enlarge as a result of increased osmotic pressure within the lumen of the cyst. This mechanism does not appear to hold true for odontogenic keratocysts, and their growth may be related to unknown factors inherent in the epithelium itself or


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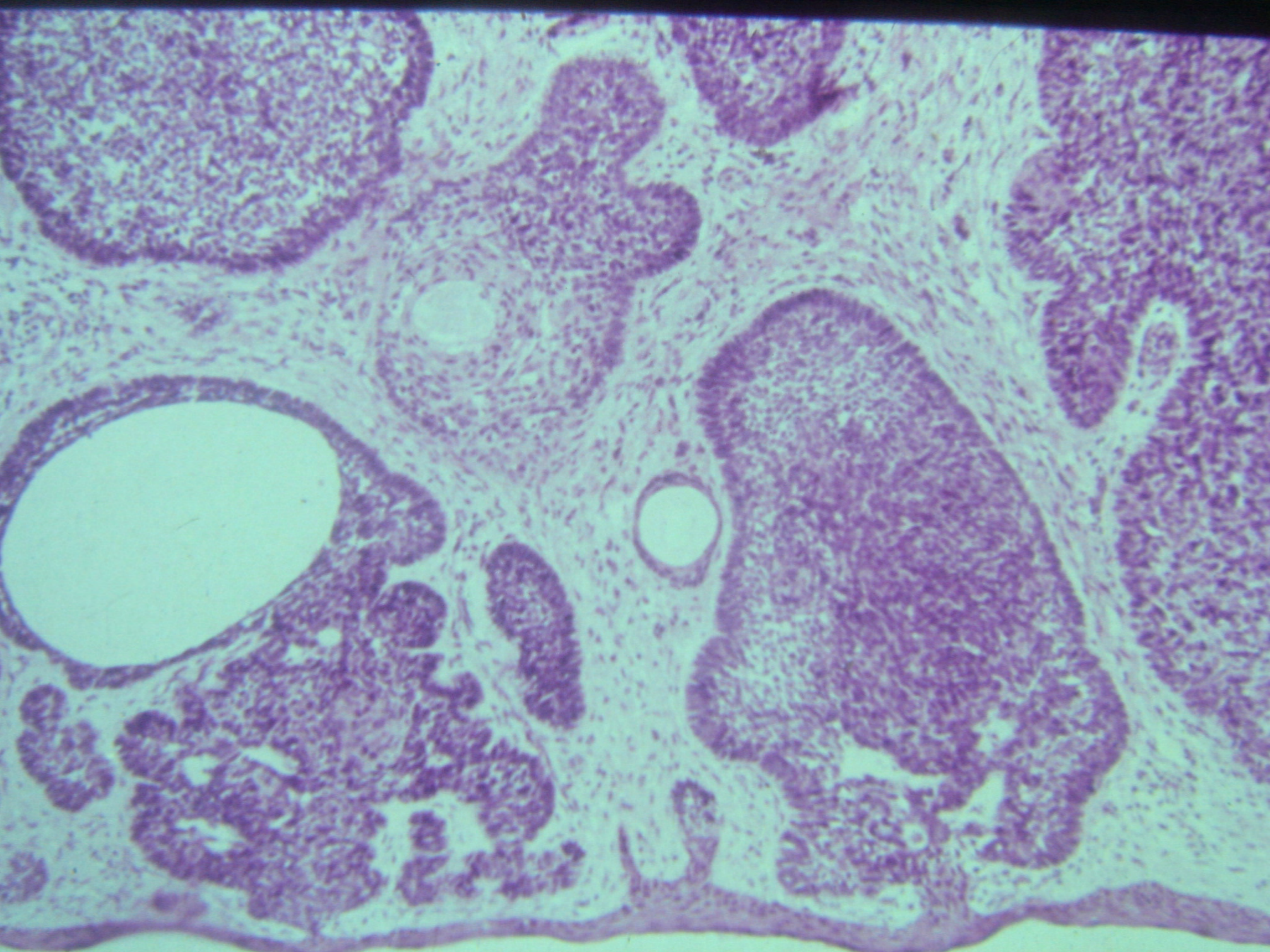


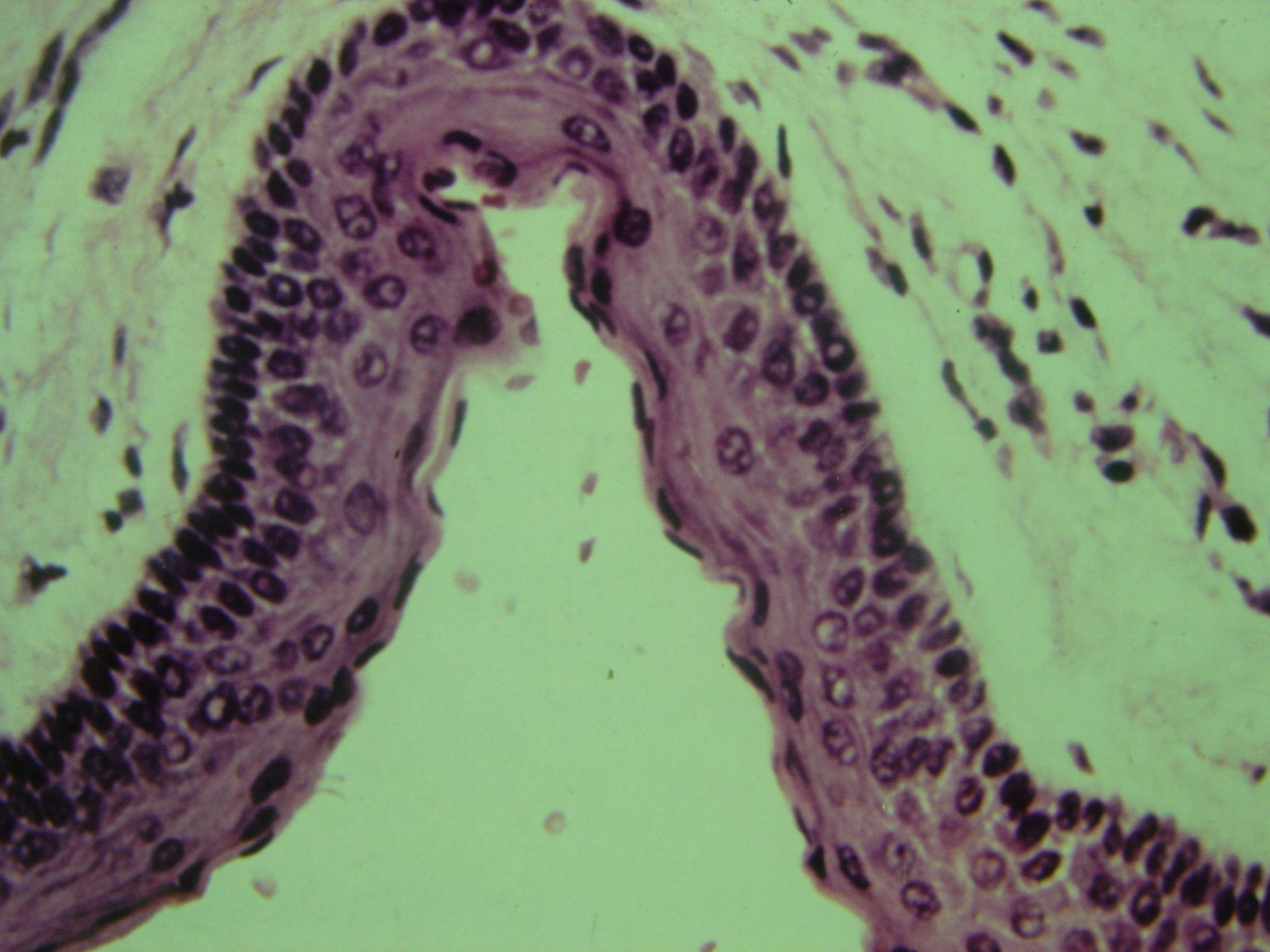


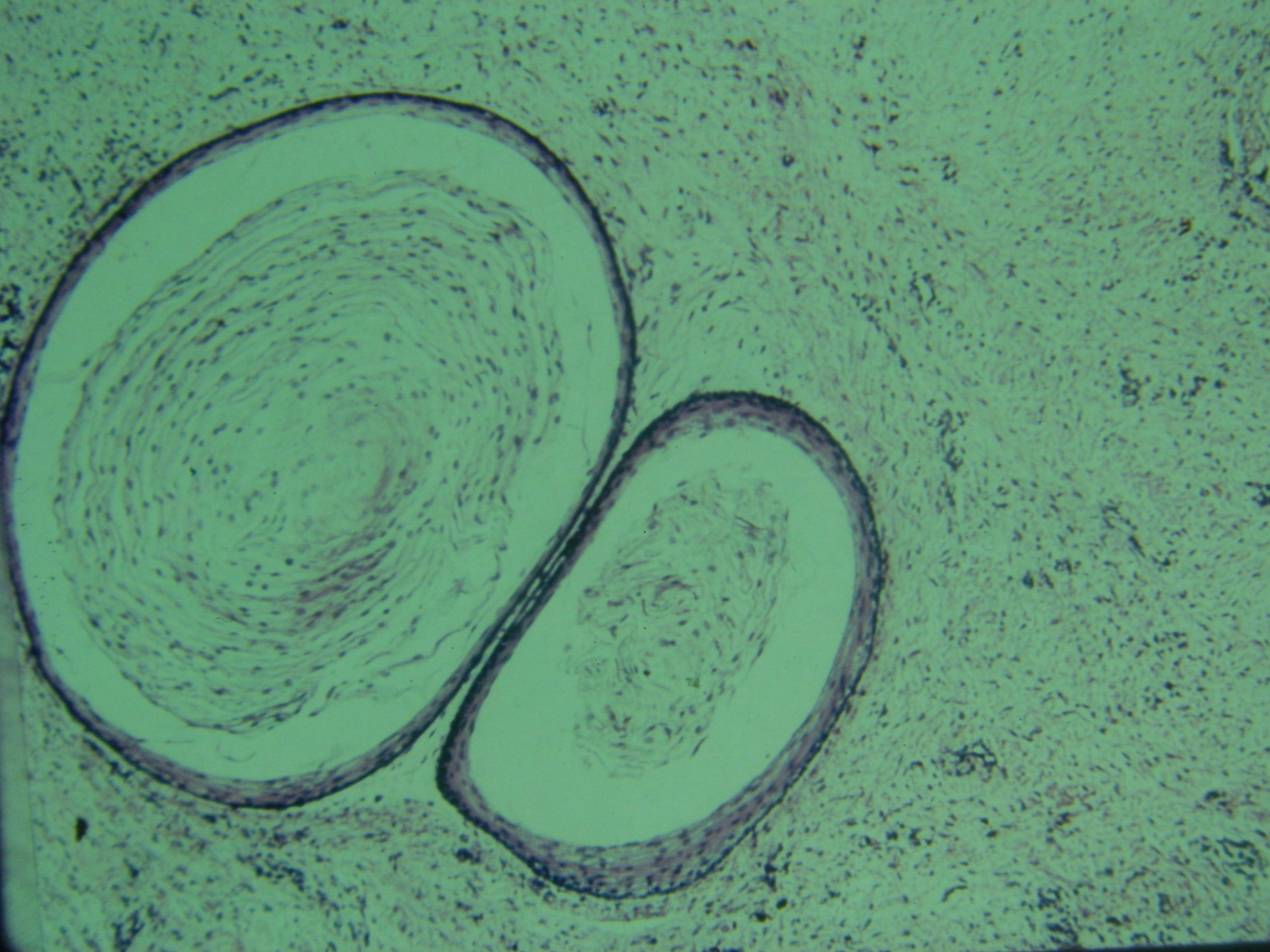

R



re 15-24 • **Nevoid basal cell carcinoma syndrome.** Antero
erior skull film showing calcification of the falx cerebri. (Cour
of Dr. Ramesh Narang.)



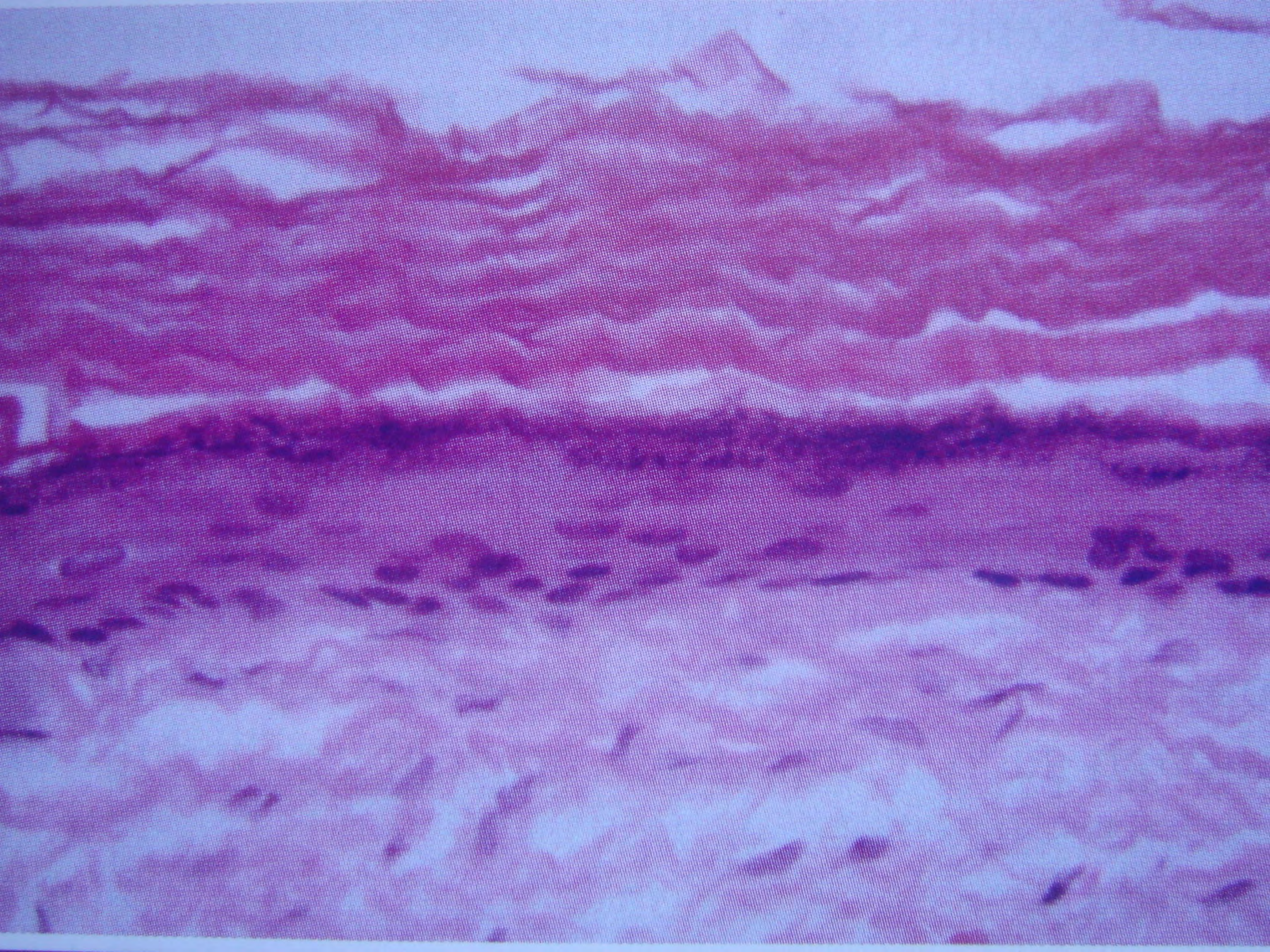




ORTHOKERATINIZED ODONTOGENIC CYST

The designation **orthokeratinized odontogenic cys** does not denote a specific clinical type of odontogen cyst but refers only to an odontogenic cyst that micro scopically has an orthokeratinized epithelial lining Although such lesions were originally called the ortho keratinized variant of odontogenic keratocyst, it generally accepted that they are clinicopathologicall different from the more common parakeratinized odon togenic keratocyst and should be placed into a differen category. Orthokeratinized odontogenic cysts represen 7% to 17% of all keratinizing jaw cysts.





Box 15-2 *Major Clinical Features of the Nevoid Basal Cell Carcinoma Syndrome*

50% OR GREATER FREQUENCY

- Multiple basal cell carcinomas
- Odontogenic keratocysts
- Epidermal cysts of the skin
- Palmar/plantar pits
- Calcified falx cerebri
- Enlarged head circumference
- Rib anomalies (splayed, fused, partially missing, bifid)
- Mild ocular hypertelorism
- Spina bífida occulta of cervical or thoracic vertebrae

15% TO 49% FREQUENCY

- Calcified ovarian fibromas
- Short fourth metacarpals
- Kyphoscoliosis or other vertebral anomalies
- Pectus excavatum or carinatum
- Strabismus (exotropia)

LESS THAN 15% FREQUENCY (BUT NOT RANDOM)

- Medulloblastoma
- Meningioma
- Lymphomesenteric cysts
- Cardiac fibroma
- Fetal rhabdomyoma
- Marfanoid build
- Cleft lip and/or palate
- Hypogonadism in males
- Mental retardation

nevoid basal cell carcinoma syndrome.

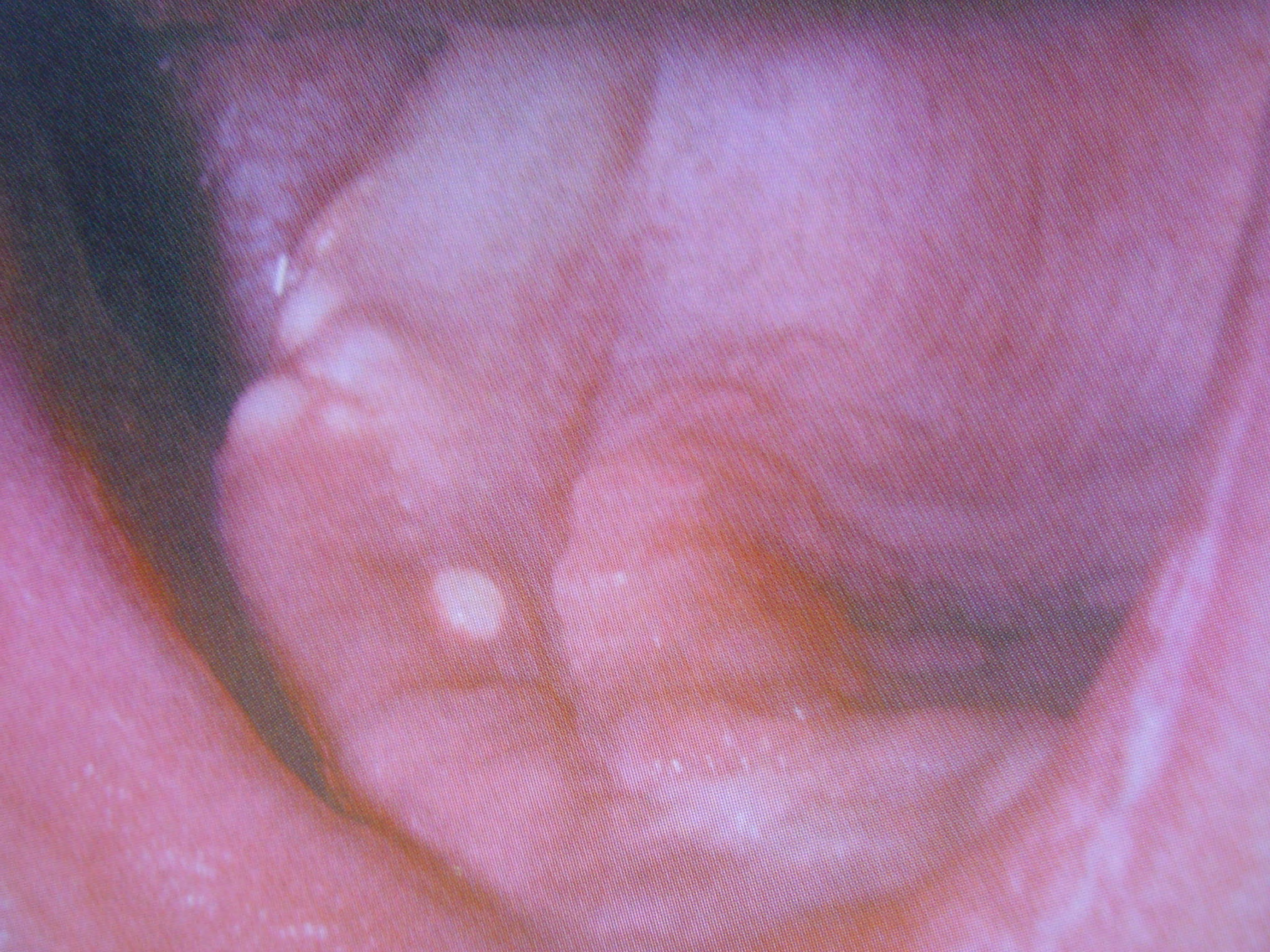
NEVOID BASAL CELL CARCINOMA SYNDROME (GORLIN SYNDROME)

Nevoid basal cell carcinoma syndrome (Gorlin syn
drome) is an autosomal dominant inherited condition that exhibits high penetrance and variable expressivity. It is caused by mutations in **patched** (PTCH), a tumo suppressor gene that has been mapped to chromosome 9q22.3-q31. The chief components are multiple basal cel carcinomas of the skin, odontogenic keratocysts, intracranial calcification, and rib and vertebral anomalies. Many other anomalies have been reported in these patients and probably also represent manifestations of the syndrome. The prevalence of Gorlin syndrome is esti-

Genetic counseling is appropriate for affe

GINGIVAL (ALVEOLAR) CYST OF THE NEWBORN

Gingival cysts of the newborn are sm
keratin-filled cysts that are found on the
of infants. These cysts arise from remna
lamina. They are common lesions, havin
in up to half of all newborns. However, be
appear spontaneously by rupture into the
lesions seldom are noticed or sampled fo



GINGIVAL CYST OF THE ADULT

The **gingival cyst of the adult** is an uncommon lesion. It is considered to represent the soft tissue counterpart of the **lateral periodontal cyst** (see next topic), being derived from rests of the dental lamina (rests of Serres). The diagnosis of gingival cyst of the adult should be restricted to lesions with the same histopathologic features as those of the lateral periodontal cyst. On rare occasions, a cyst may develop in the gingiva at the site of a gingival graft; however, such lesions probably represent *epithelial inclusion cysts* that are a result of the surgical procedure.

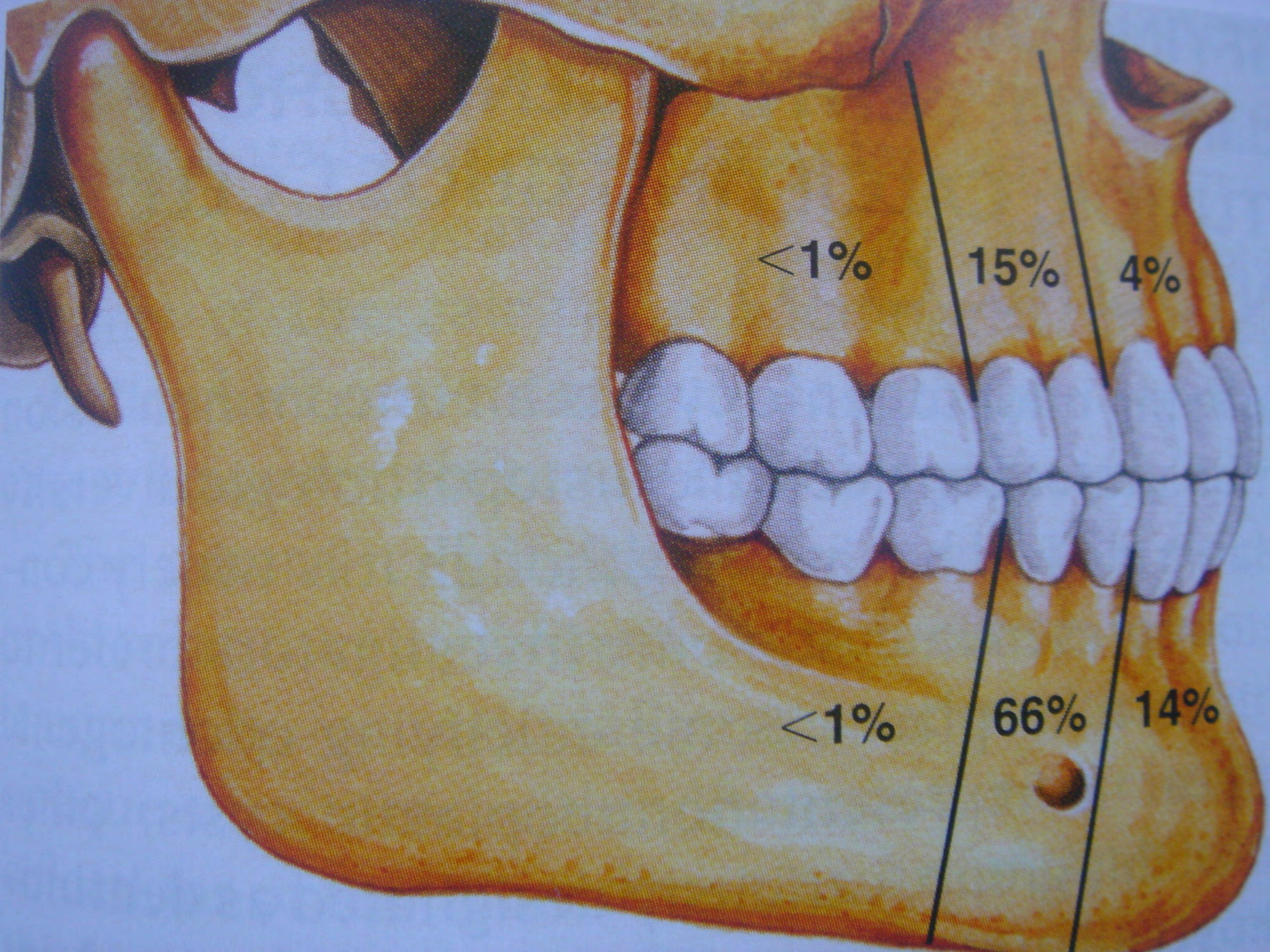
Clinical Features



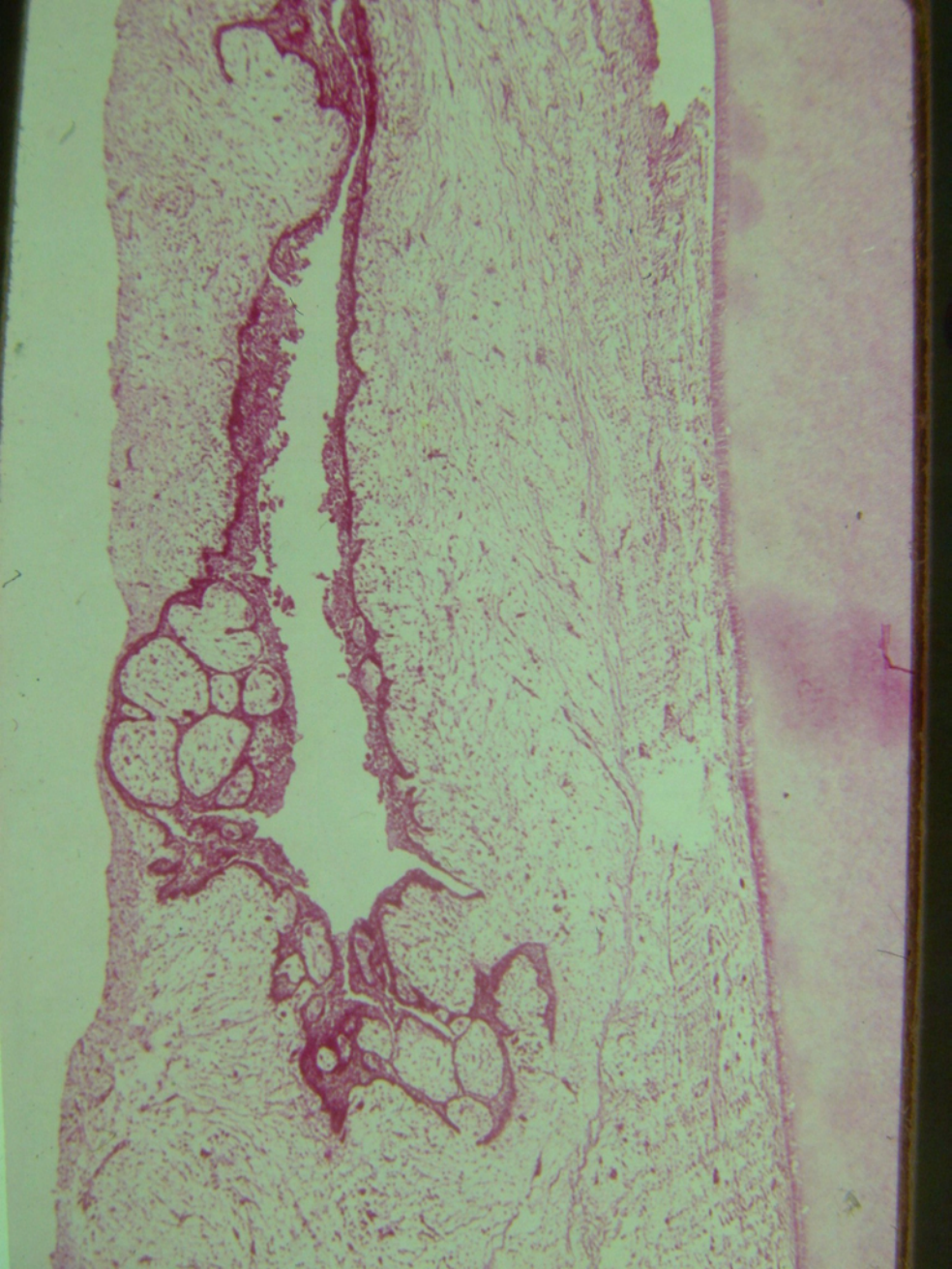
LATERAL PERIODONTAL CYST (BOTRYOID ODONTOGENIC CYST)

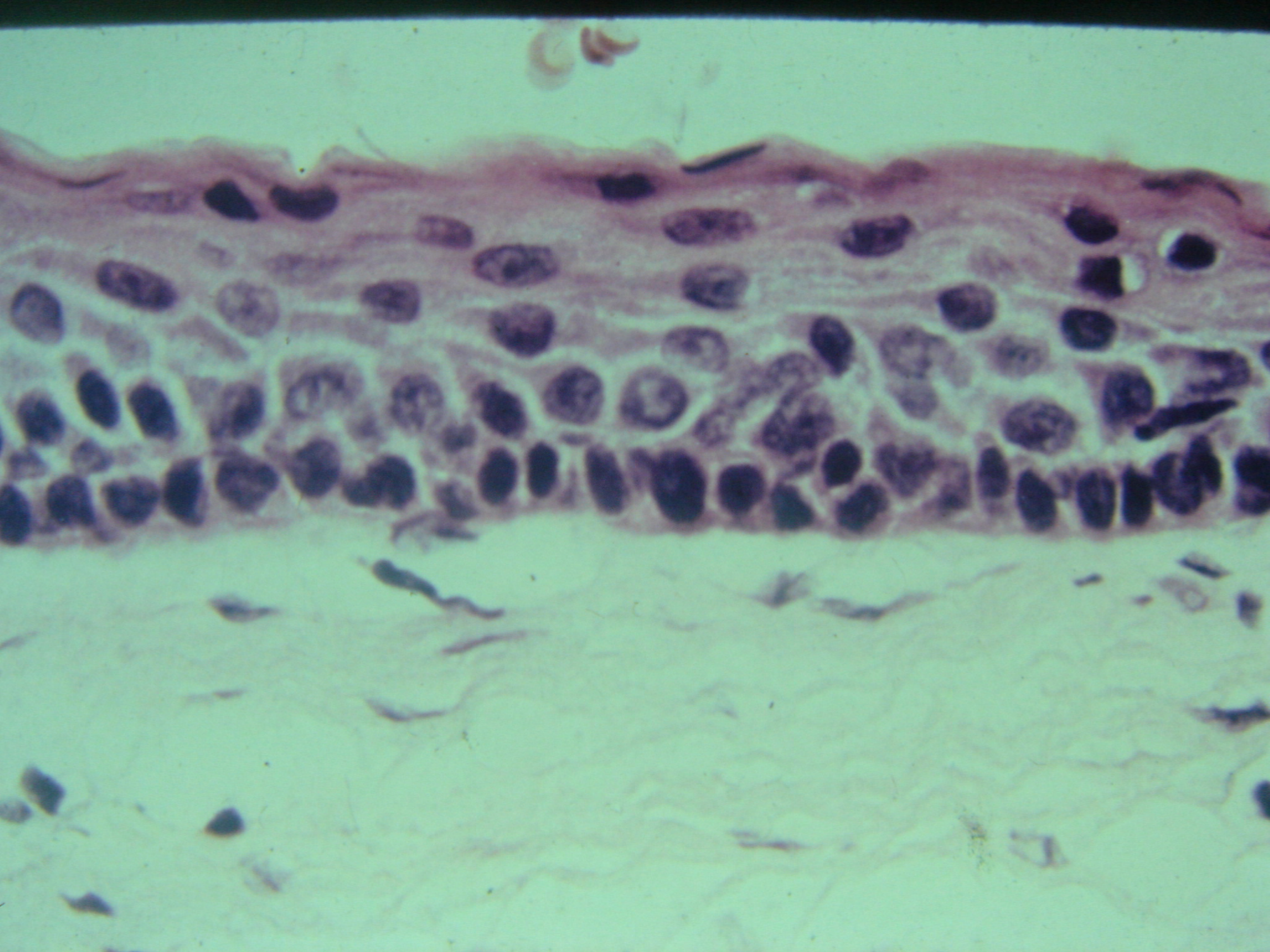
The **lateral periodontal cyst** is an uncommon type developmental odontogenic cyst that typically occu along the lateral root surface of a tooth. It is believed arise from rests of the dental lamina and it represents t intrabony counterpart of the gingival cyst of the adu The lateral periodontal cyst accounts for less than 2% all epithelium-lined jaw cysts.

In the past, the term *lateral periodontal cyst* was use to describe any cyst that developed along the lateral roo surface, including lateral radicular cysts (see page 116 and odontogenic keratocysts (see page 594). Howeve


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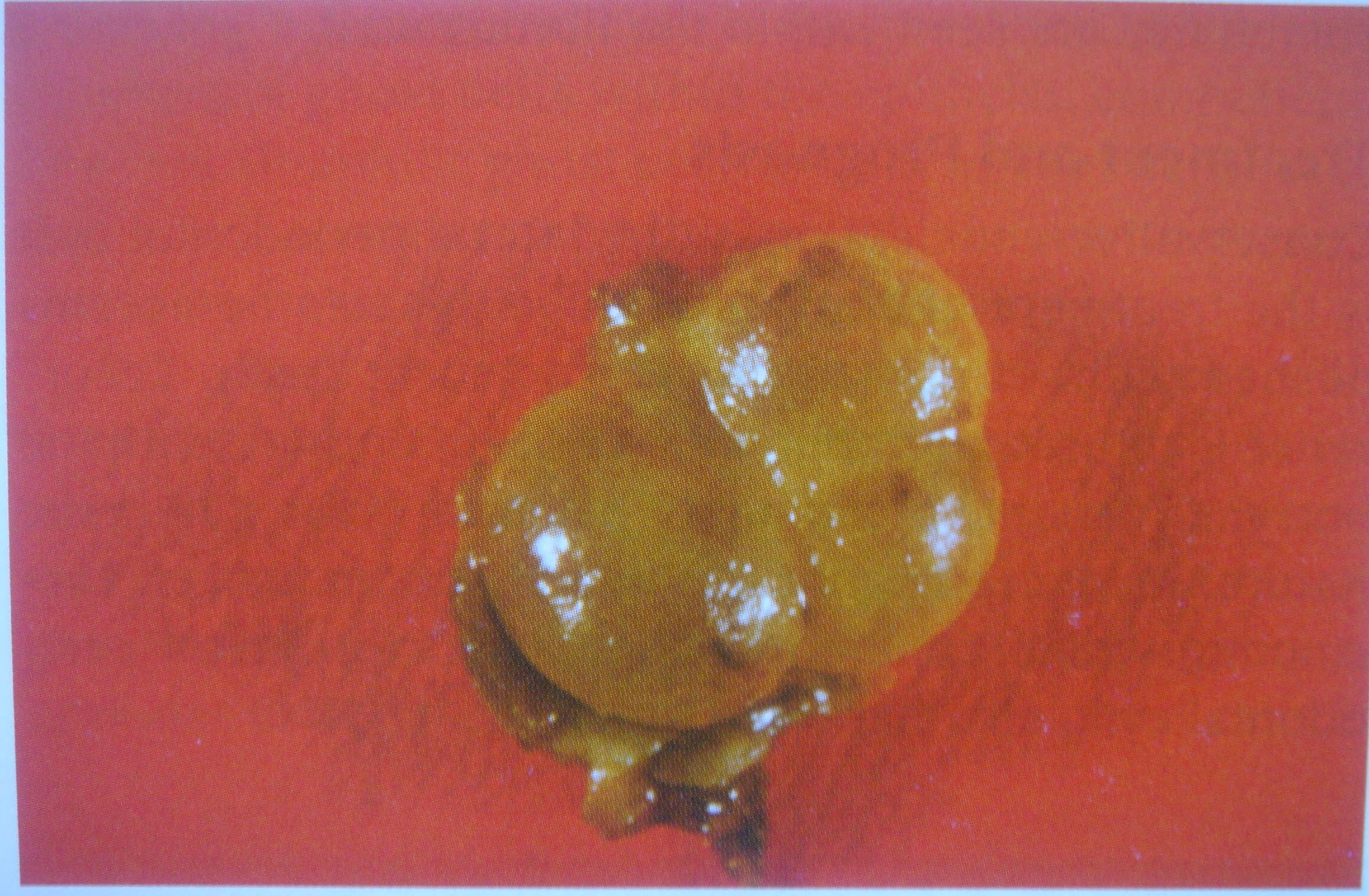
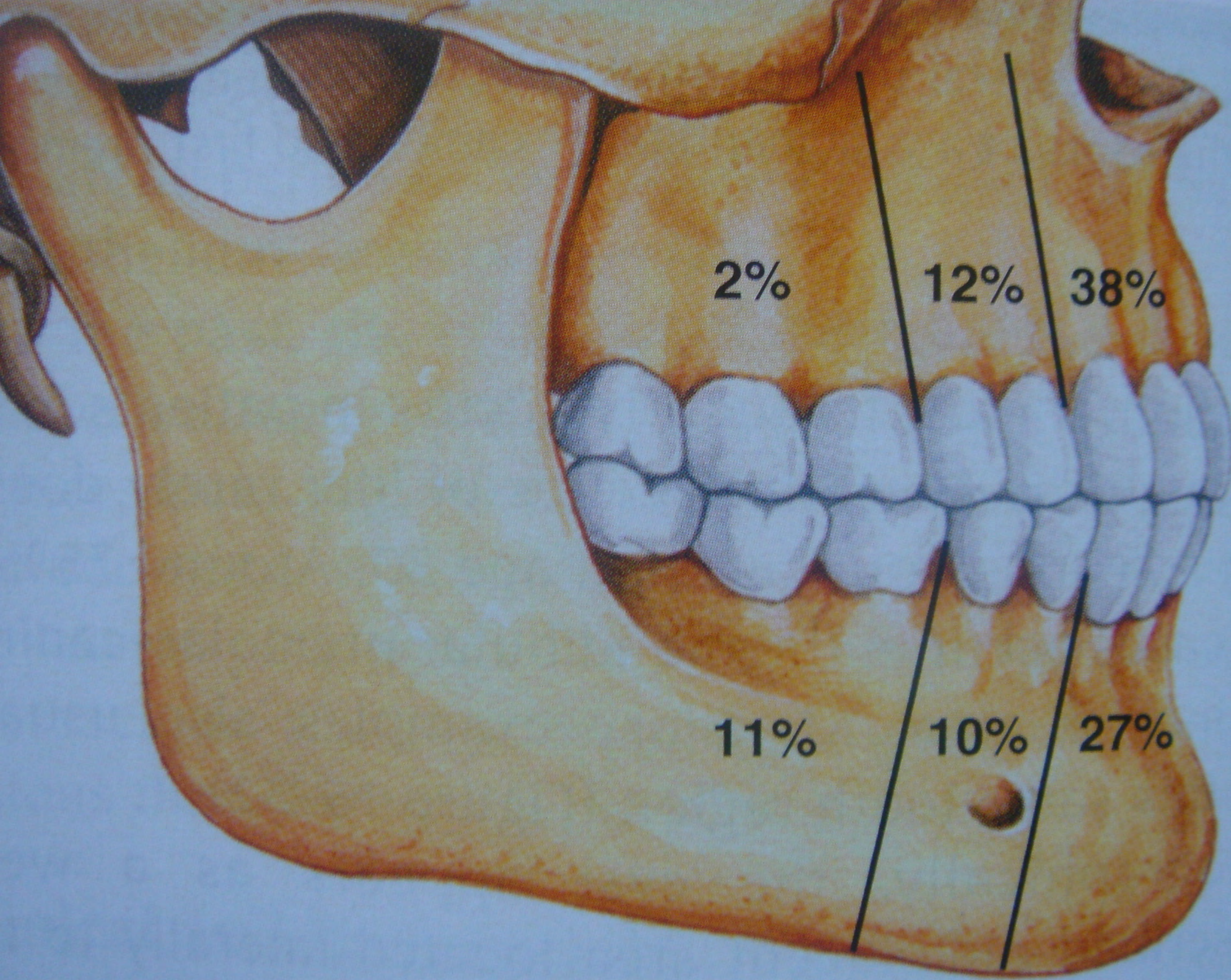
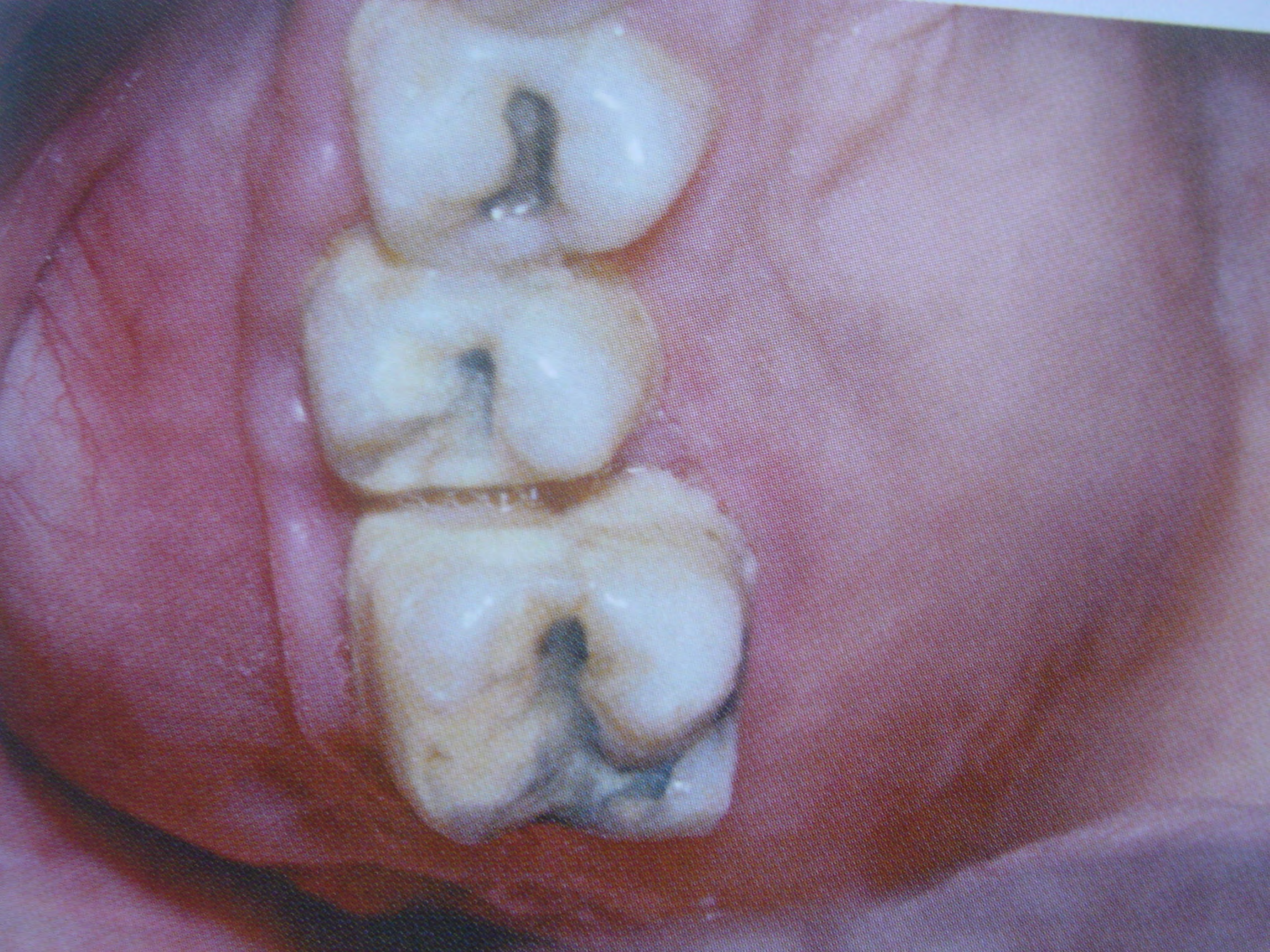


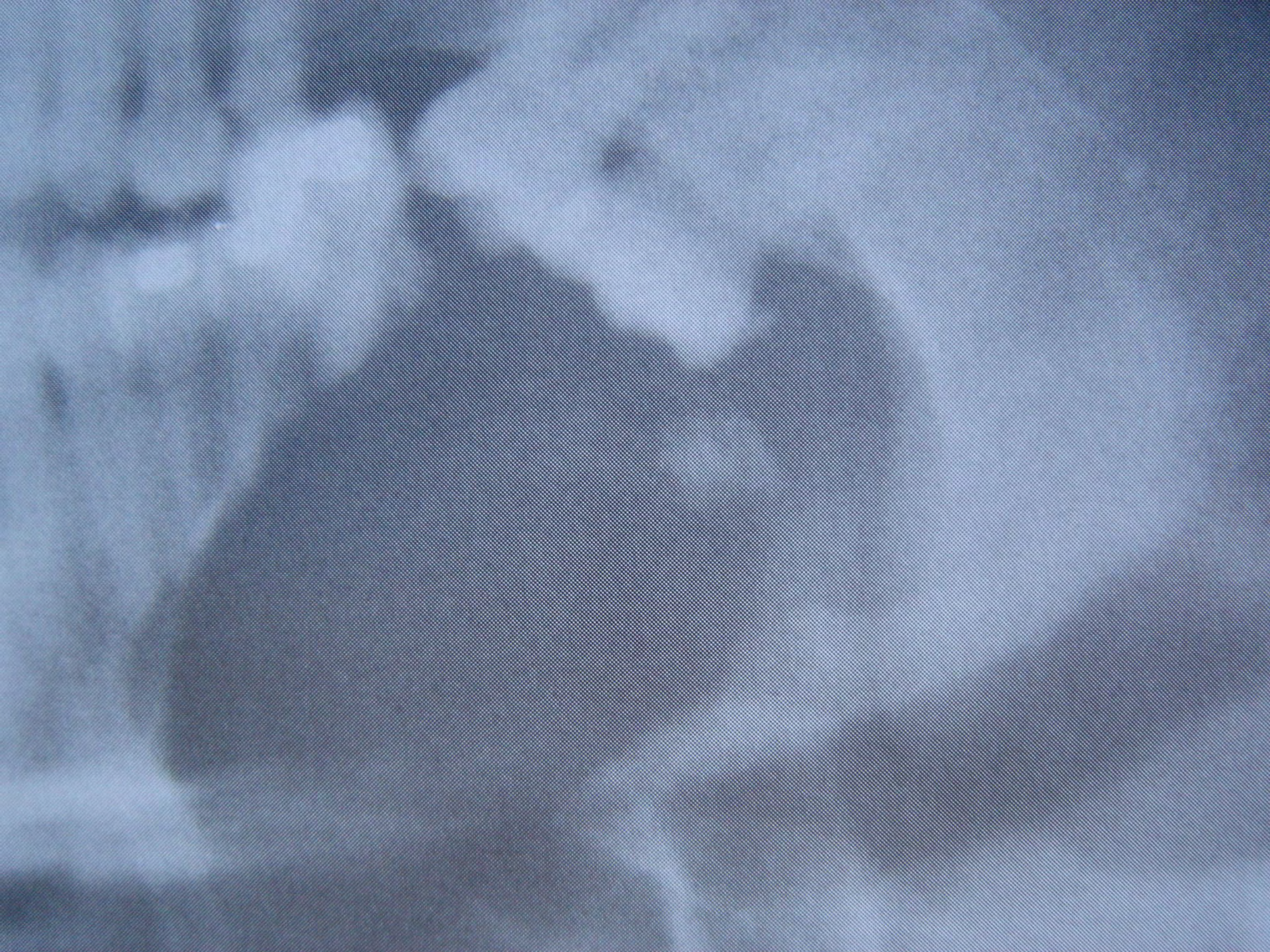
Figure 15-35 • Lateral periodontal cyst. Gross specimen of a botryoid variant. Microscopically, this grapelike cluster revealed three separate cavities.

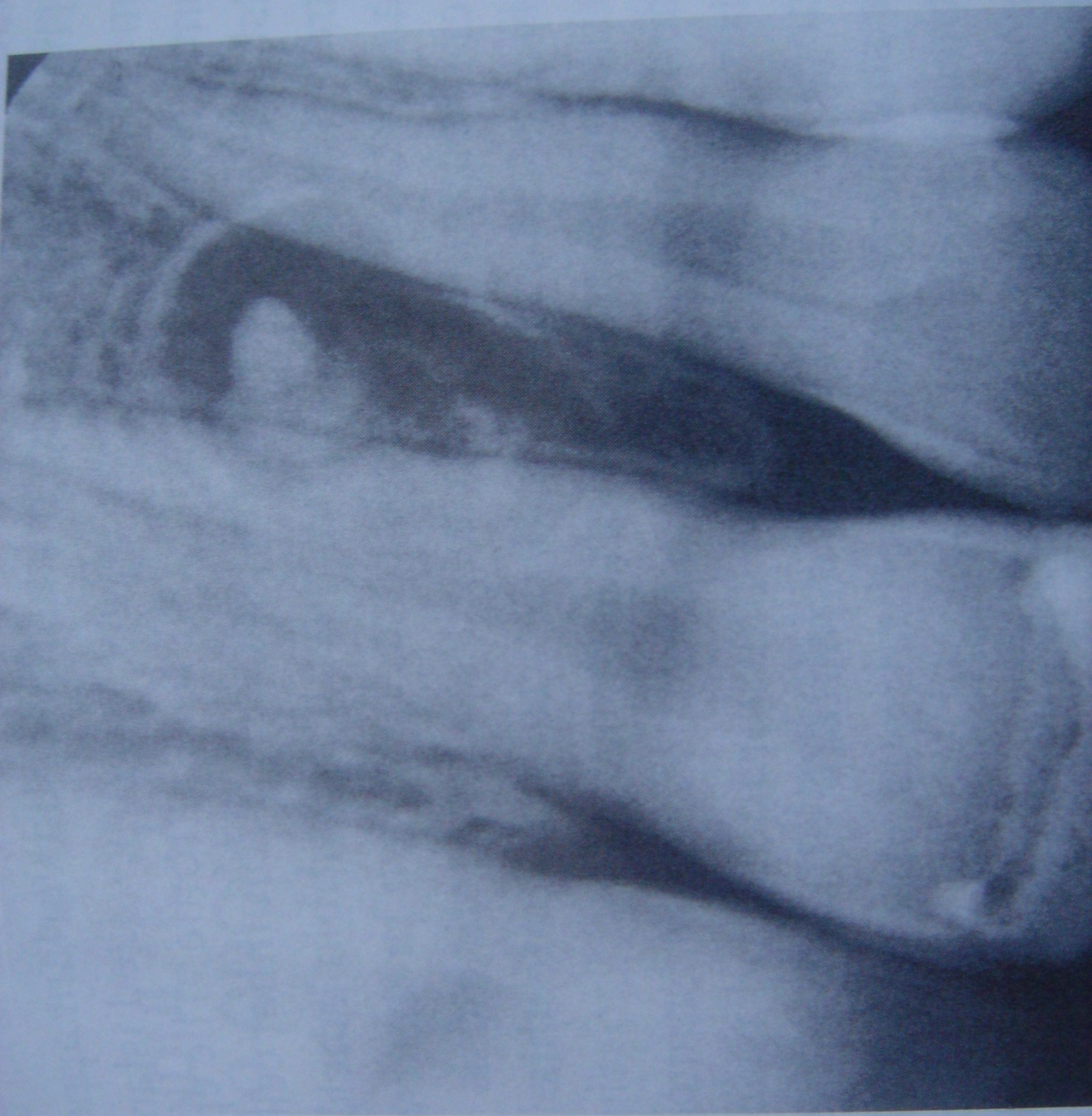
CALCIFYING ODONTOGENIC CYST (GORLIN CYST; DENTINOGENIC GHOST CELL TUMOR; CALCIFYING GHOST CELL ODONTOGENIC CYST)

The **calcifying odontogenic cyst** is an uncommon lesion that demonstrates considerable histopathologic diversity and variable clinical behavior. Although it is widely considered to represent a cyst, some investigators prefer to classify it as a neoplasm. Some calcifying odontogenic cysts appear to represent nonneoplastic cysts; other members of this group, variously designated as **dentinogenic ghost cell tumors** or **epithelial odontogenic ghost cell tumors**, have no cystic features, may be infiltrative or even malignant, and are regarded as neoplasms.

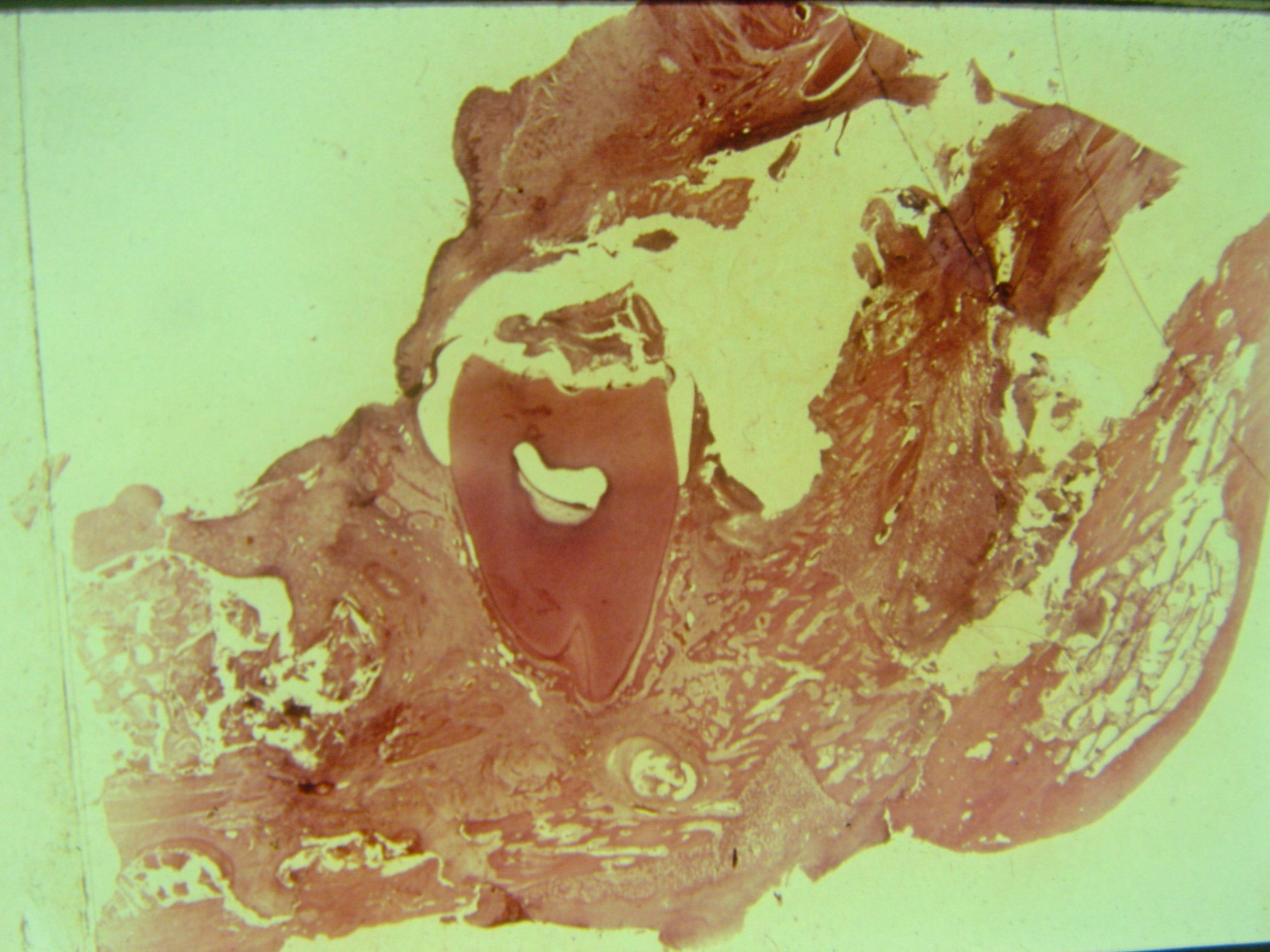

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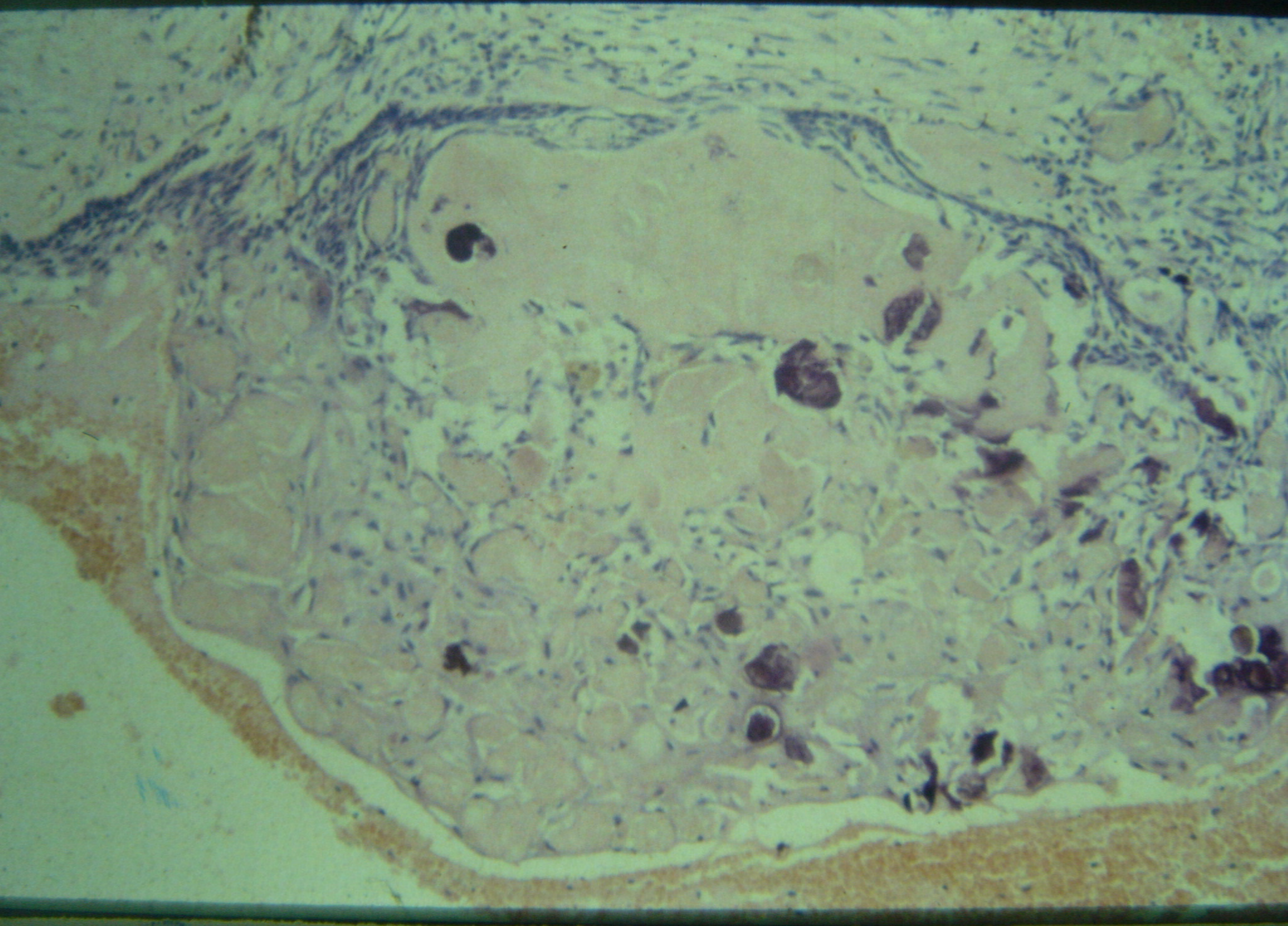







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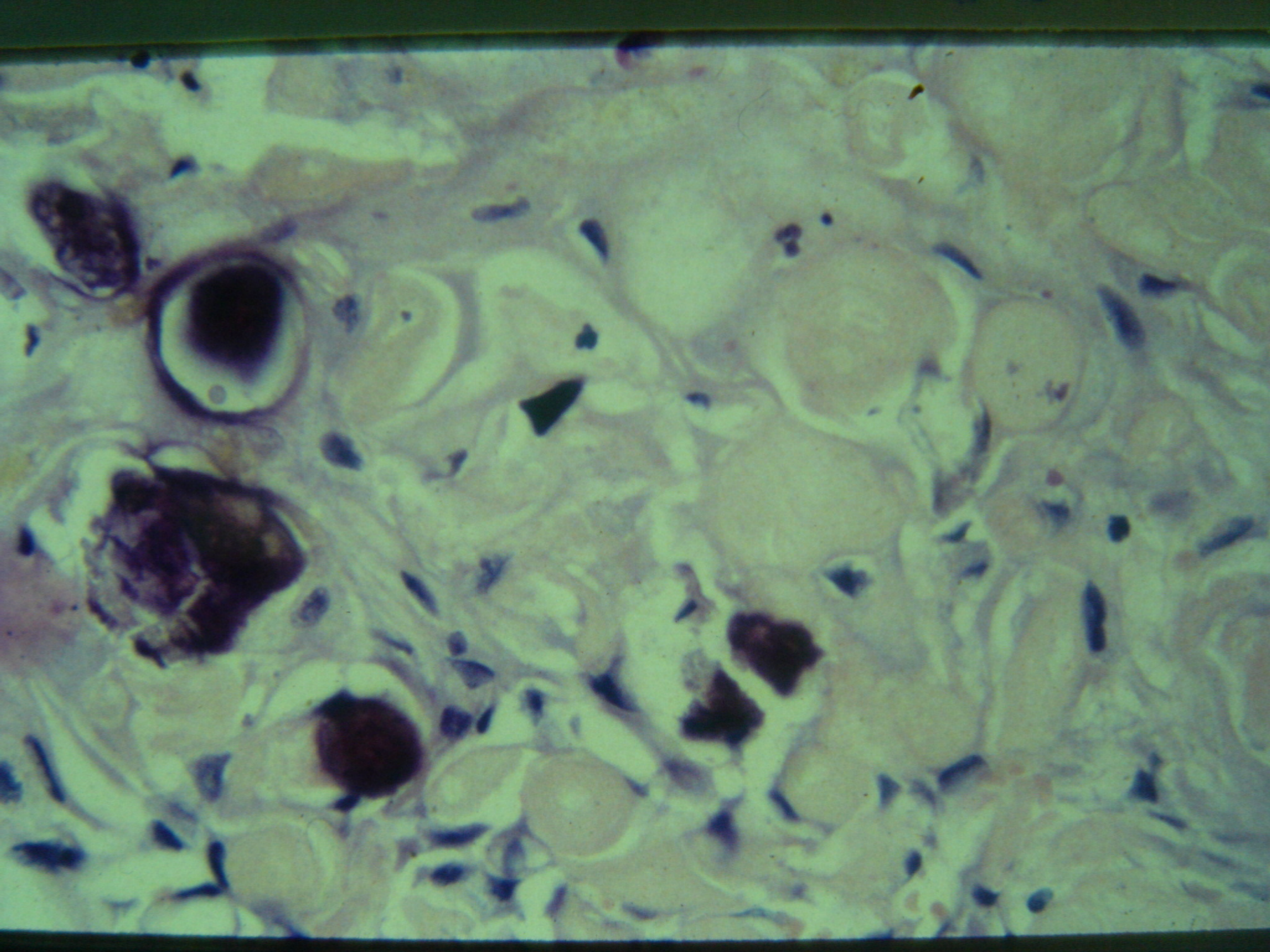
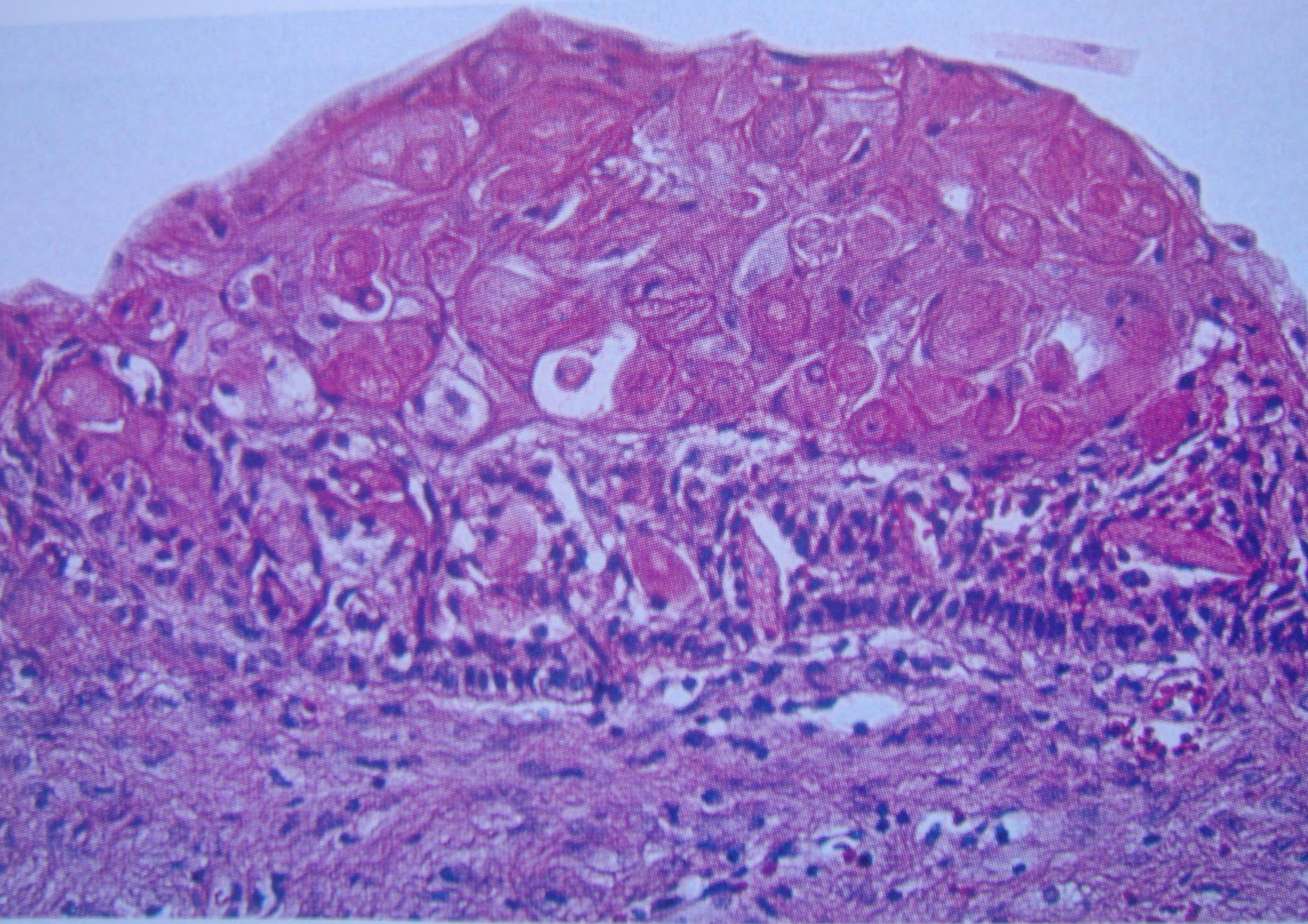
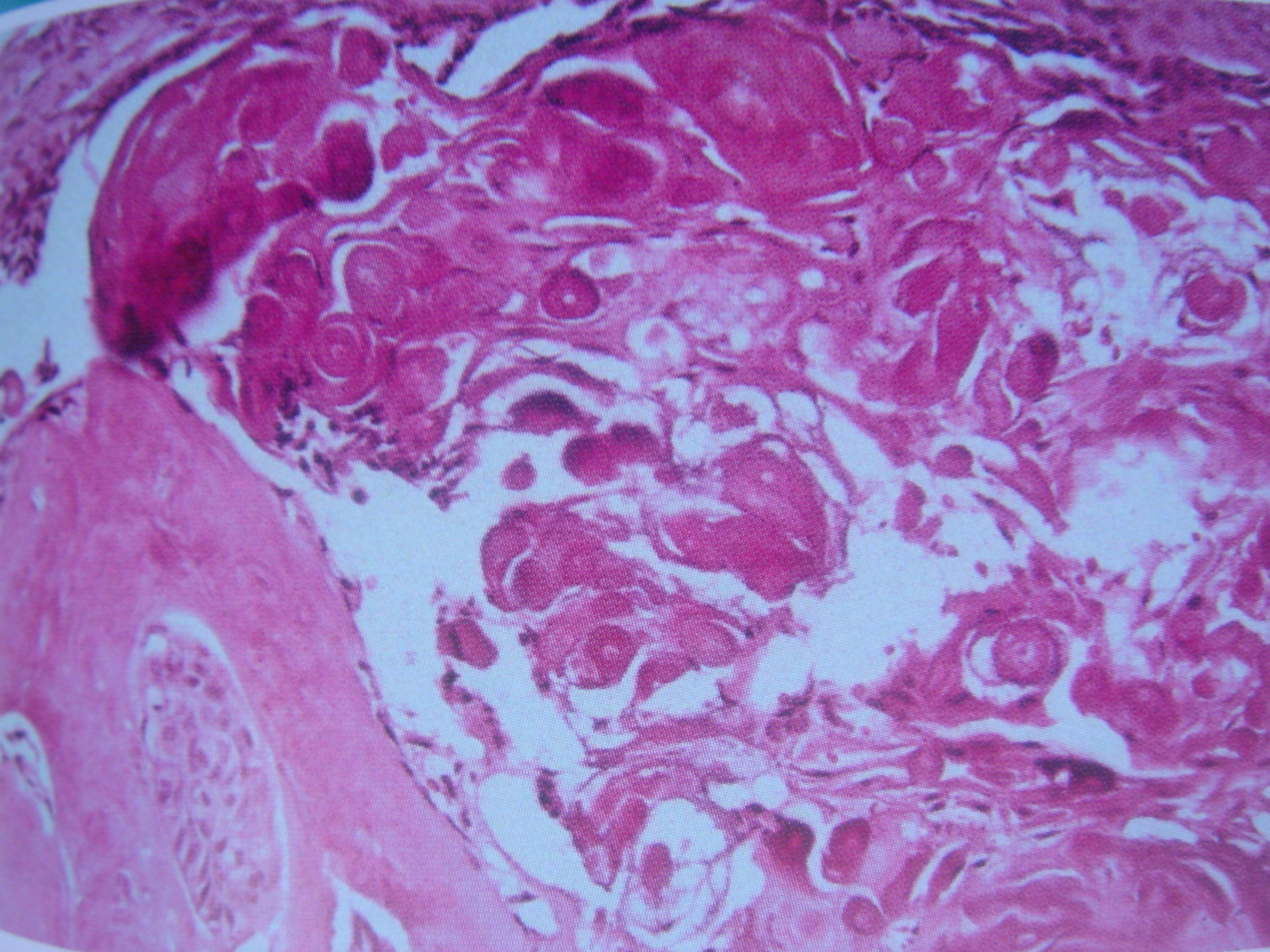




Figure 15-40 • Peripheral calcifying odontogenic cyst. Nodular mass of the mandibular facial gingiva.





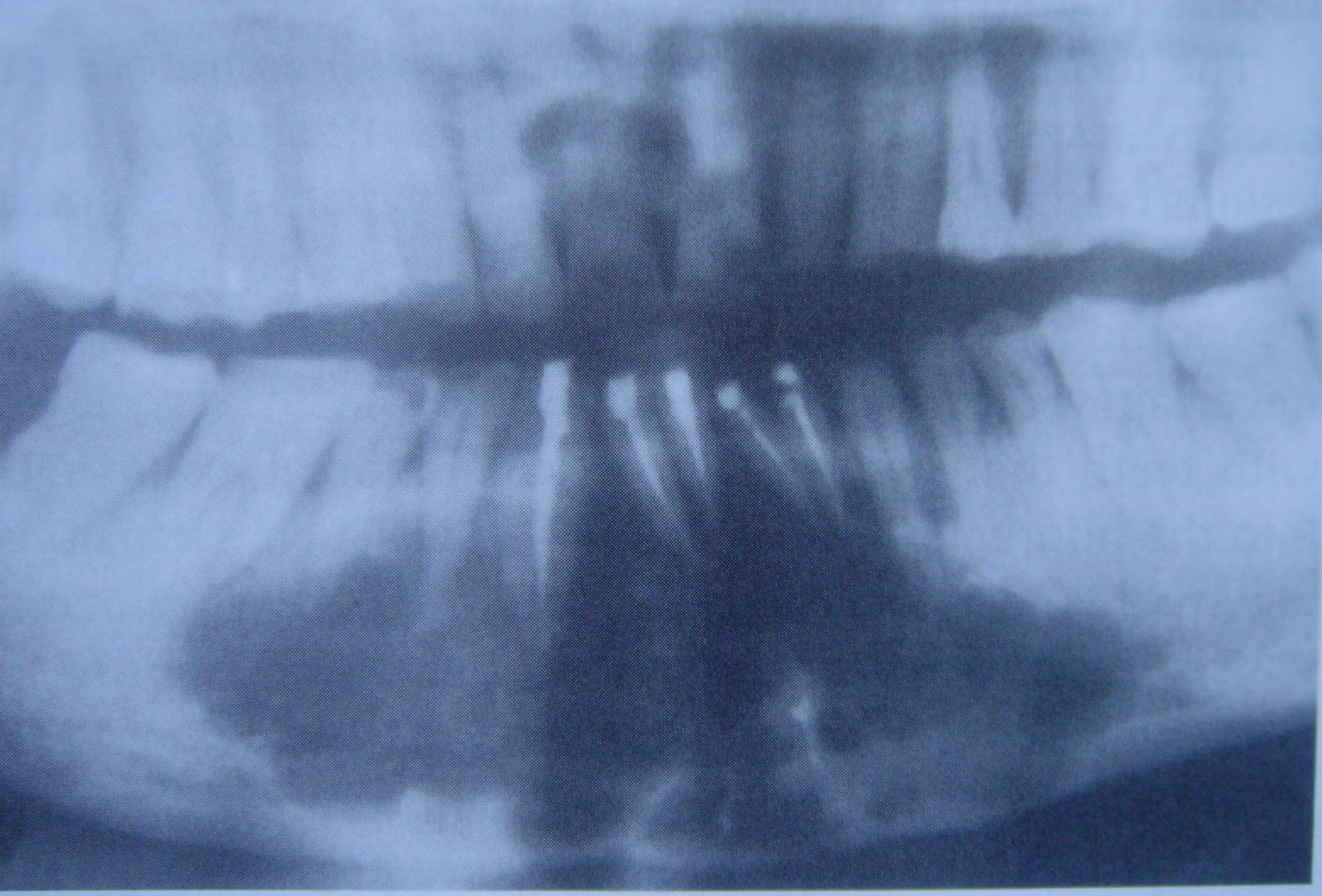
GLANDULAR ODONTOGENIC CYST (SIALO-ODONTOGENIC CYST)

The **glandular odontogenic cyst** is a rare and recently recognized type of developmental odontogenic cyst that can show aggressive behavior. Although it is generally accepted as being of odontogenic origin, it also shows glandular or salivary features that presumably are an indication of the pluripotentiality of odontogenic epithelium.

Clinical and Radiographic Features

The glandular odontogenic cyst occurs most commonly in middle-aged adults with a mean age of 49 years at the time of diagnosis; rarely does it occur before the age of 20. Nearly 85% of reported cases have occurred in the





B

ansile lesion of the anterior mandible. **B,** The
olucency. (Courtesy of Dr. Cheng-Chung Lin.)

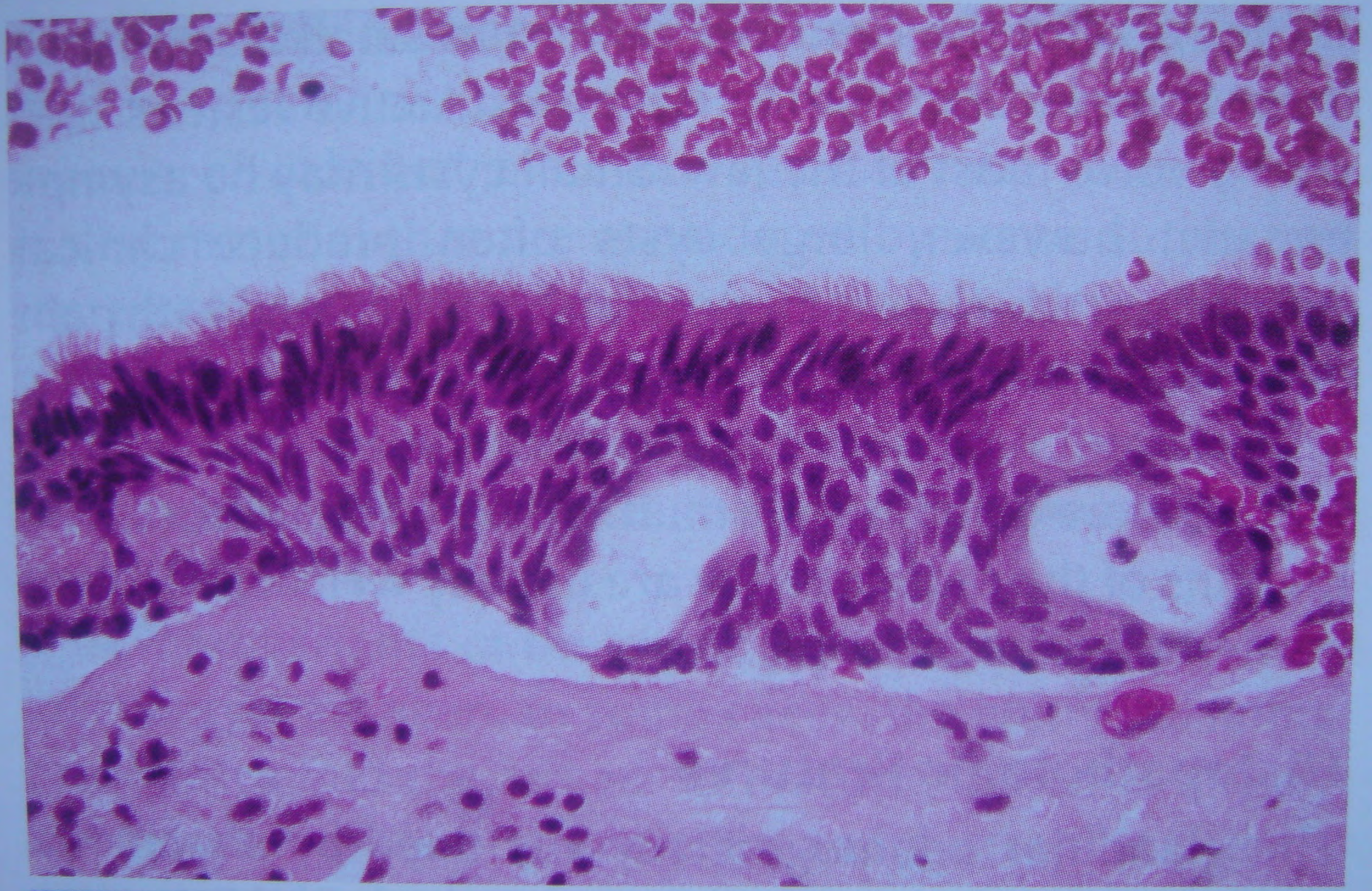
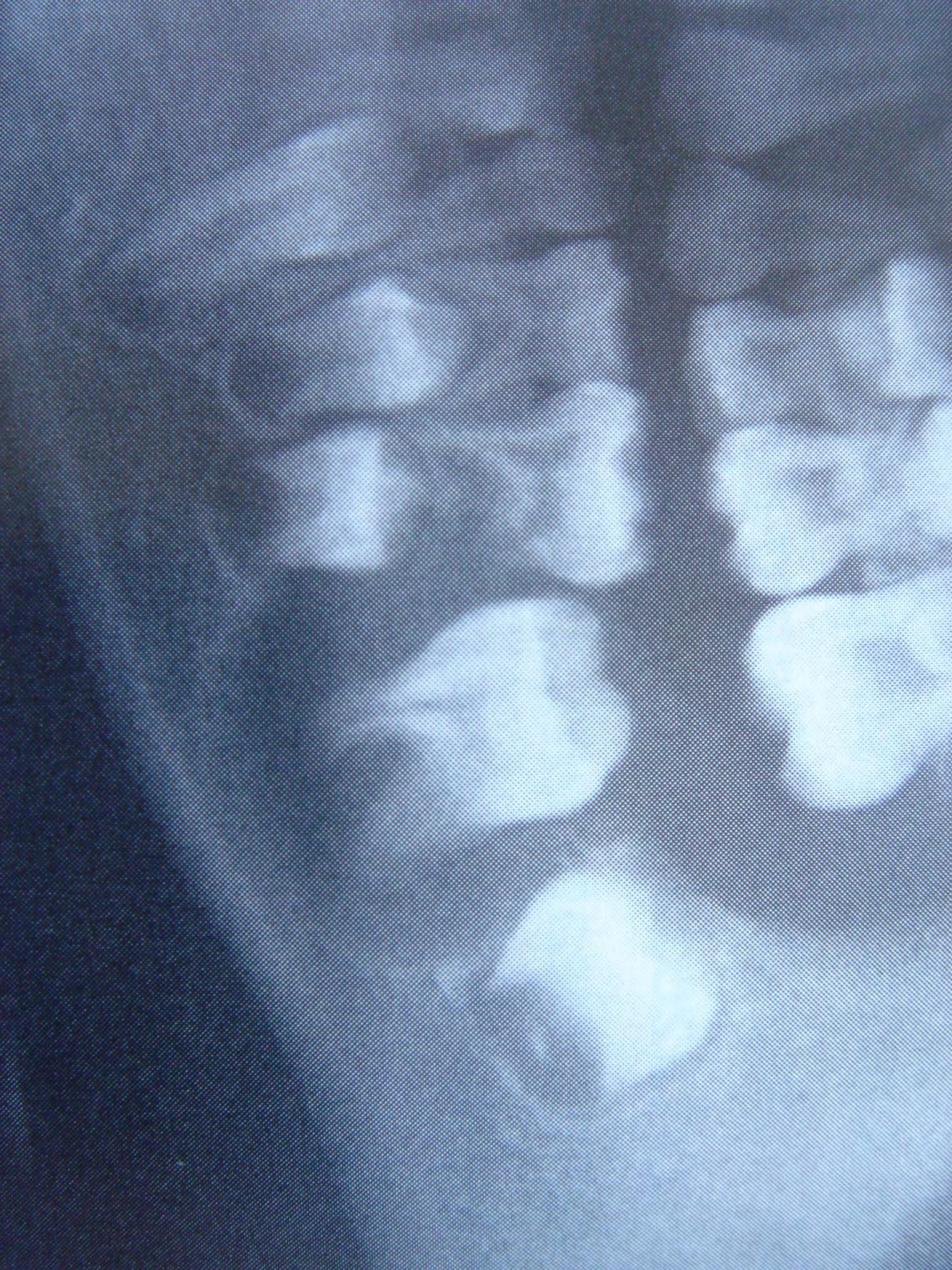


Figure 15-44 ◆ Glandular odontogenic cyst. The cyst is lined by stratified squamous epithelium that exhibits surface columnar

BUCCAL BIFURCATION CYST

The **buccal bifurcation cyst** is an uncommon inflammatory odontogenic cyst that characteristically develops on the buccal aspect of the mandibular first permanent molar. The pathogenesis of this cyst is uncertain. It has been speculated that when the tooth erupts, an inflammatory response may occur in the surrounding follicular tissues that stimulates cyst formation.

The term **paradental cyst** sometimes has been used synonymously for the buccal bifurcation cyst. Such lesions typically occur distal or buccal of partially erupted mandibular third molars with a history of pericoronitis. The pathogenesis of the so-called paradental cyst also is uncertain. Some of these lesions have been associated with teeth that demonstrate buccal enamel extensions



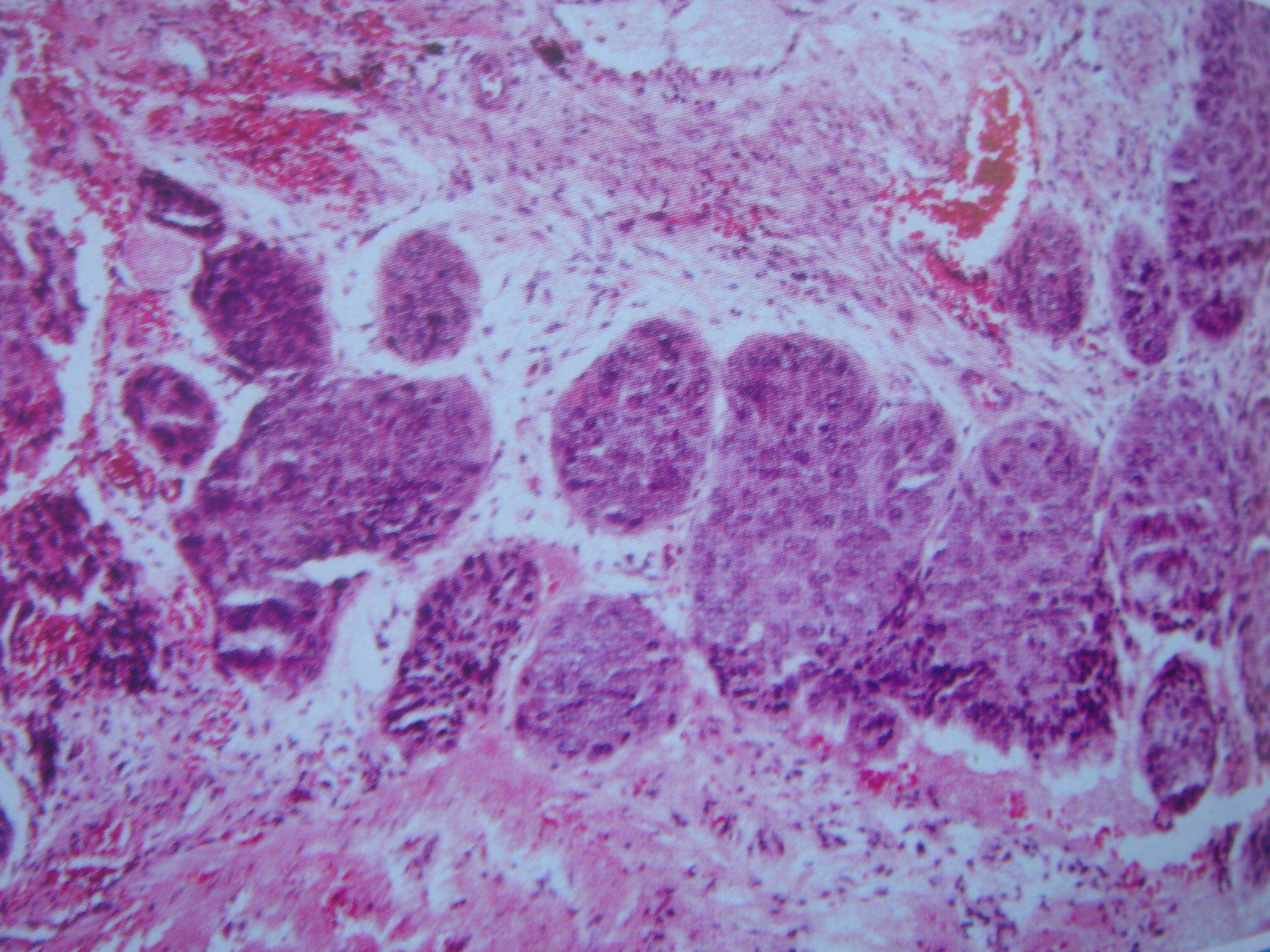


CARCINOMA ARISING IN ODONTOGENIC CYSTS

Carcinoma arising within bone is a rare lesion that essentially limited to the jaws. Because the putativ source of the epithelium giving rise to the carcinoma odontogenic, these intraosseous jaw carcinomas are co lectively known as **odontogenic carcinomas.** Odonto genic carcinomas may arise in an ameloblastoma, rarel from other odontogenic tumors, *de novo* (without evi dence of a preexisting lesion), or from the epithelial lining of odontogenic cysts. Some intraosseous mucoepider moid carcinomas (see page 422) also may arise from



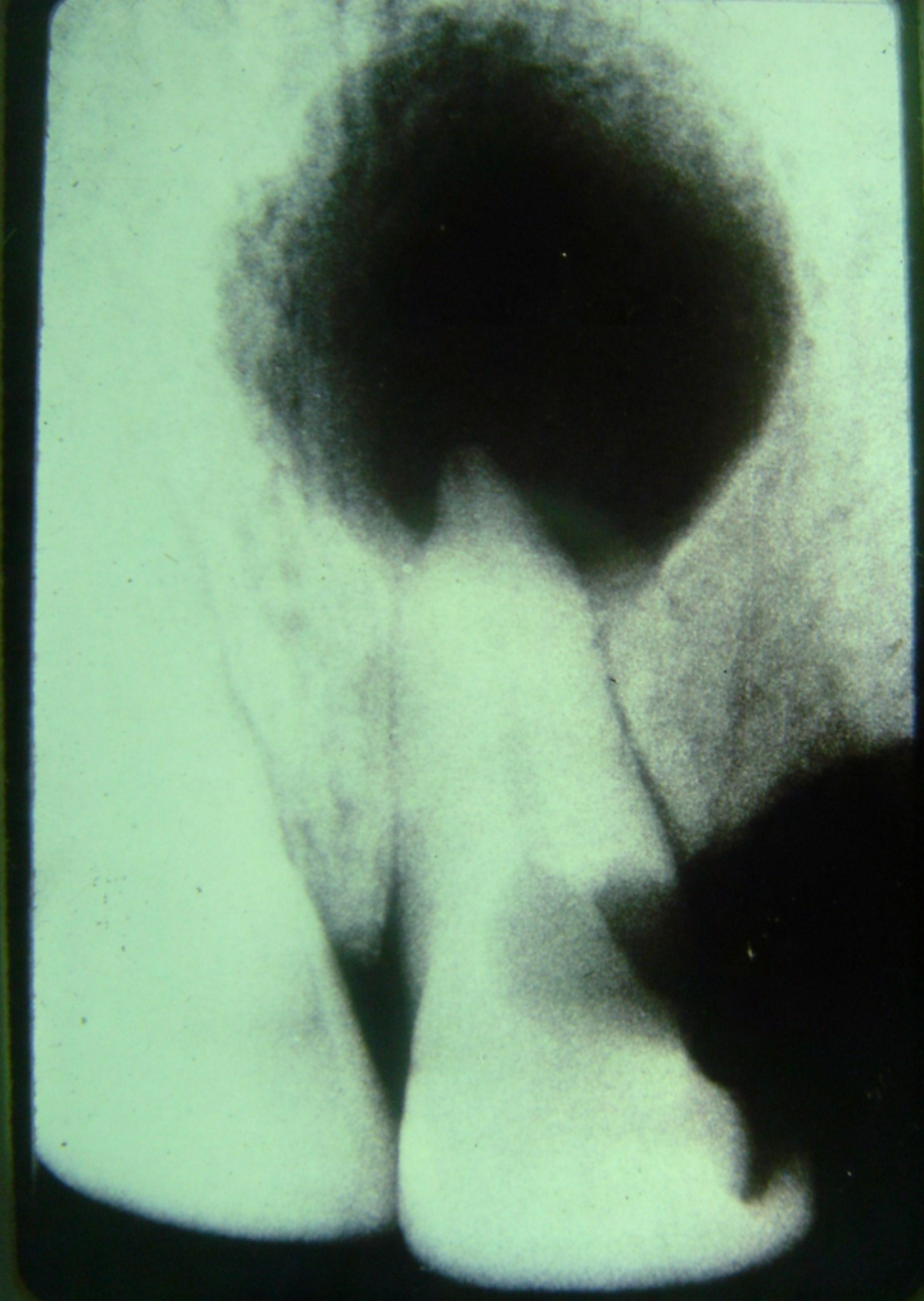
Figure 15-48 ◆ Carcinoma arising in a cyst. There is a massive carcinoma of the mandible, with extension into the parotid gland, the face, and the base of the brain. Nineteen years previously, a



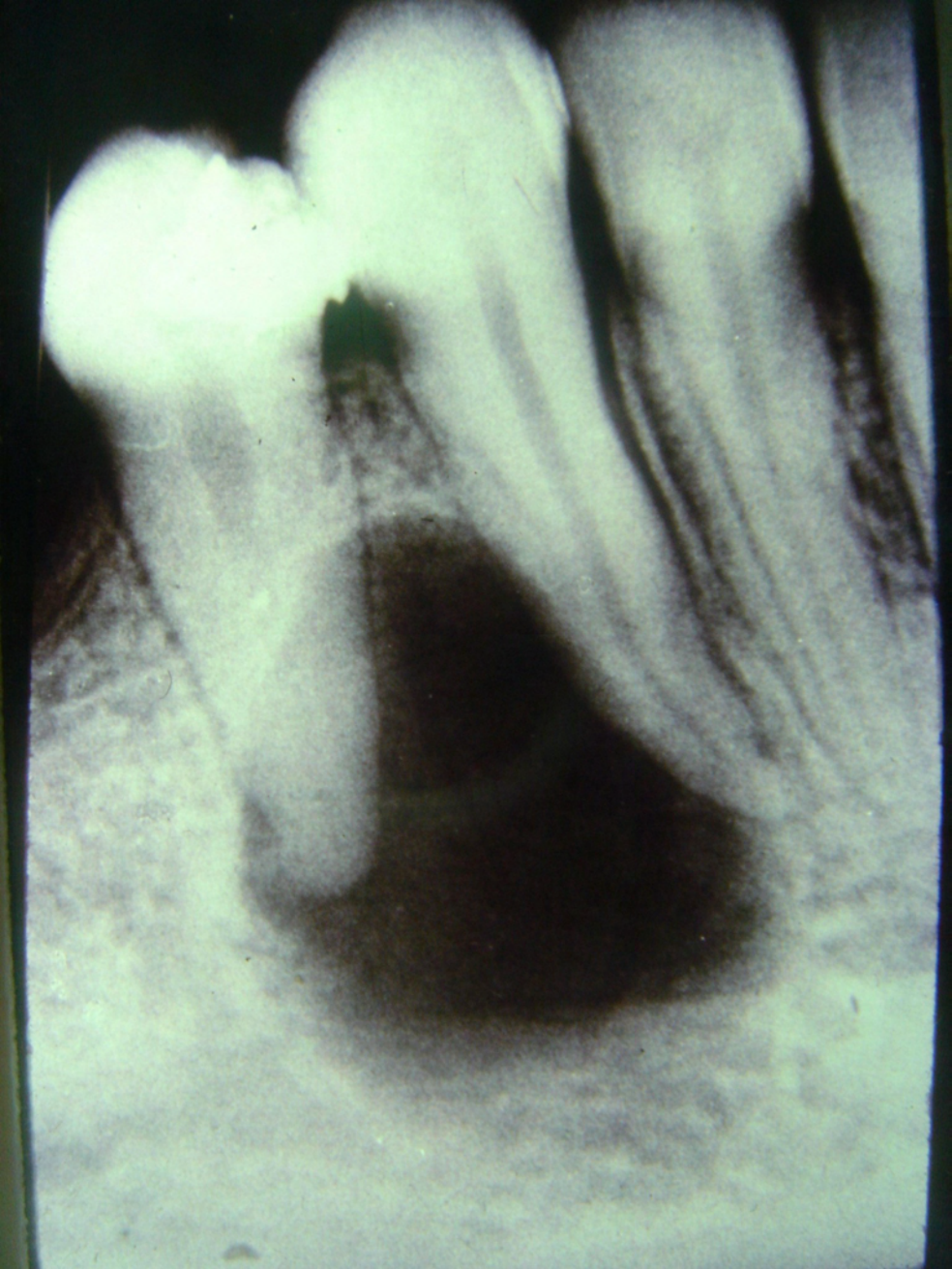
PERIAPICAL CYST (RADICULAR CYST; APICAL PERIODONTAL CYST)

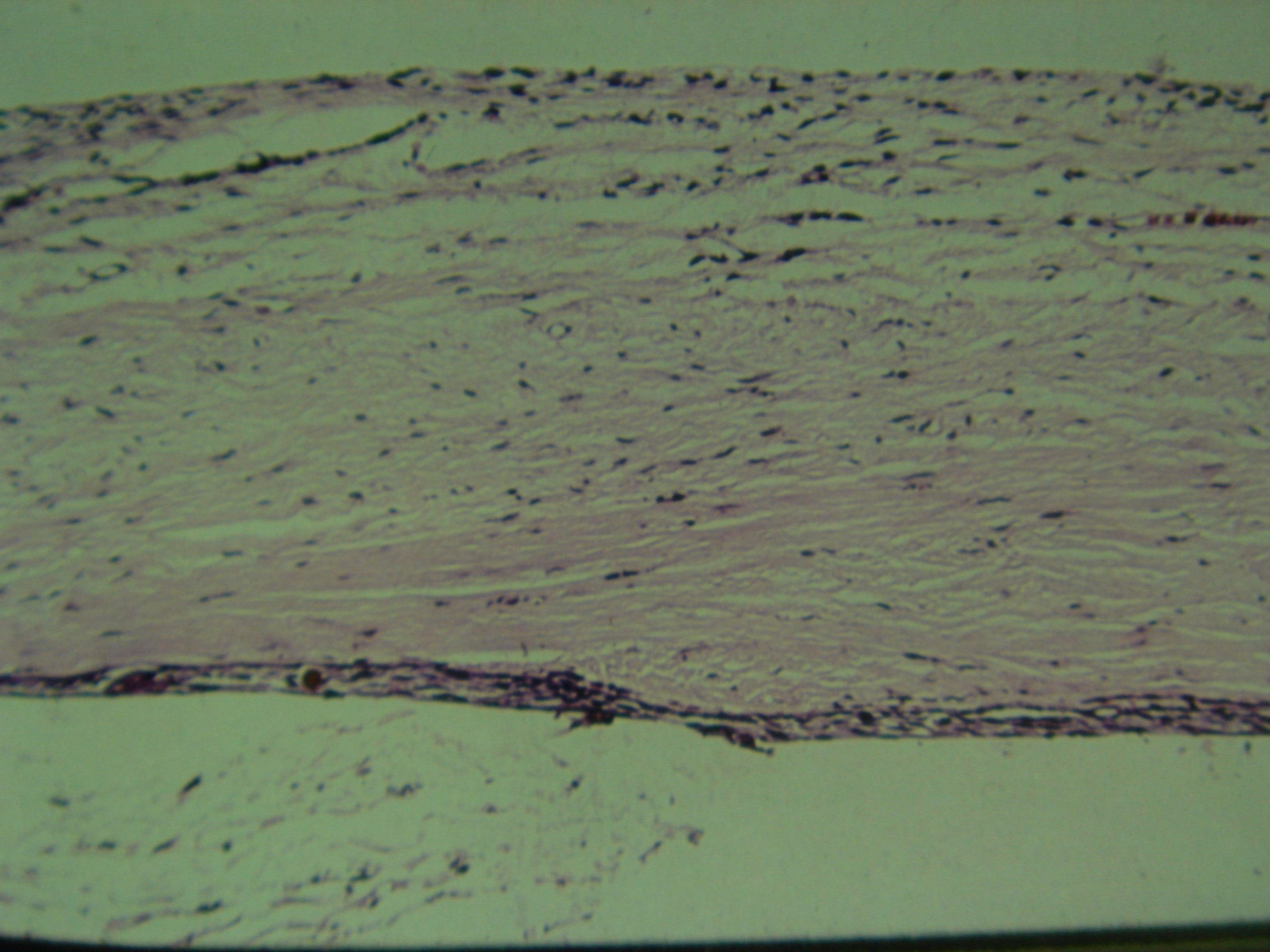
Epithelium at the apex of a nonvital tooth can be presumably stimulated by inflammation to form a true epithelium-lined cyst, or **periapical cyst.** The inflammatory response appears to increase the production of keratinocyte growth factor by periodontal stroma cells, leading to increased proliferation of normally quiescent epithelium in the area. The source of the epithelium is usually a rest of Malassez but also may be traced to crevicular epithelium, sinus lining, or epithelial lining of fistulous tracts. Cyst development is common; the reported frequency varies from 7% to 54% of periapical radiolucencies.

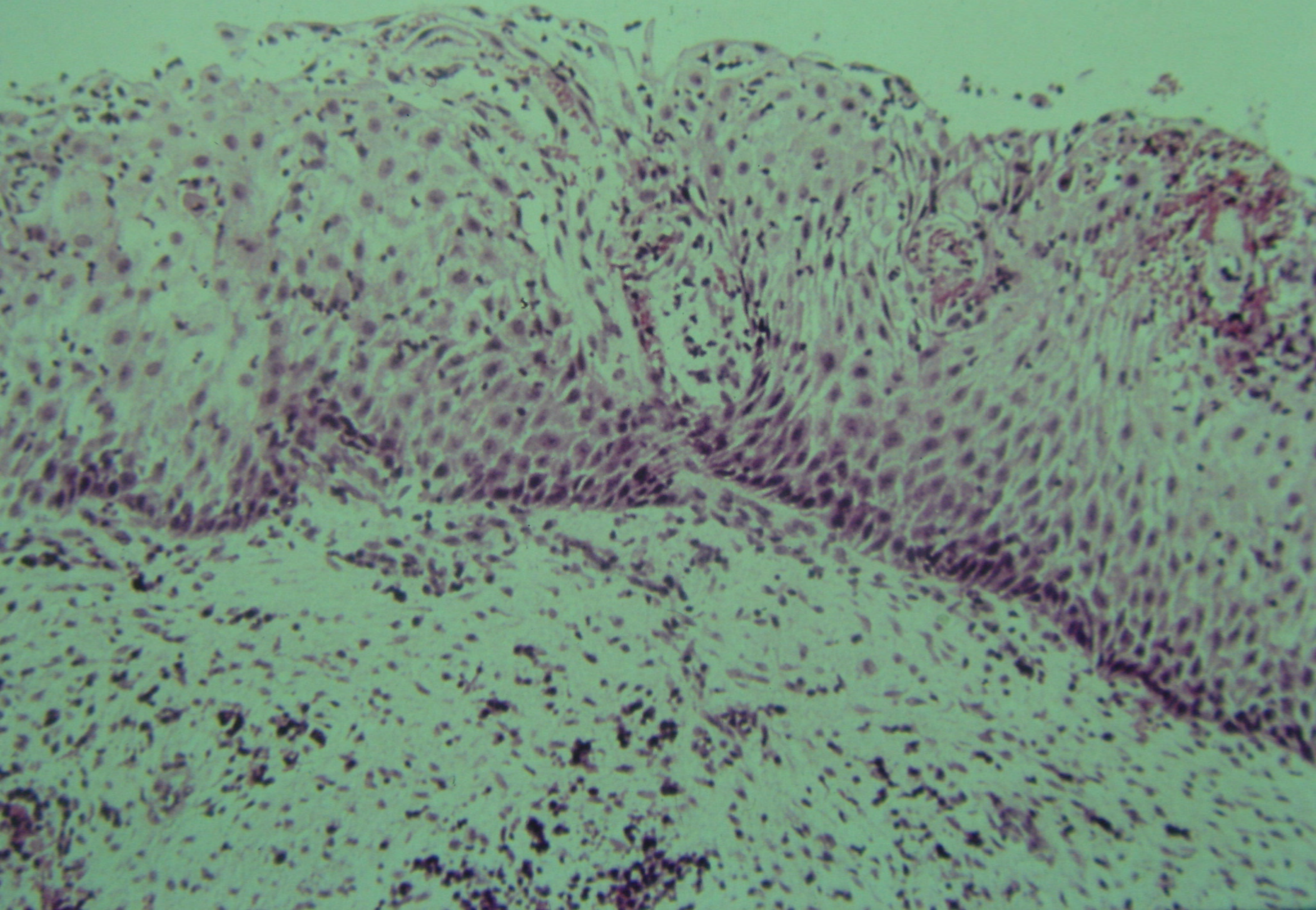


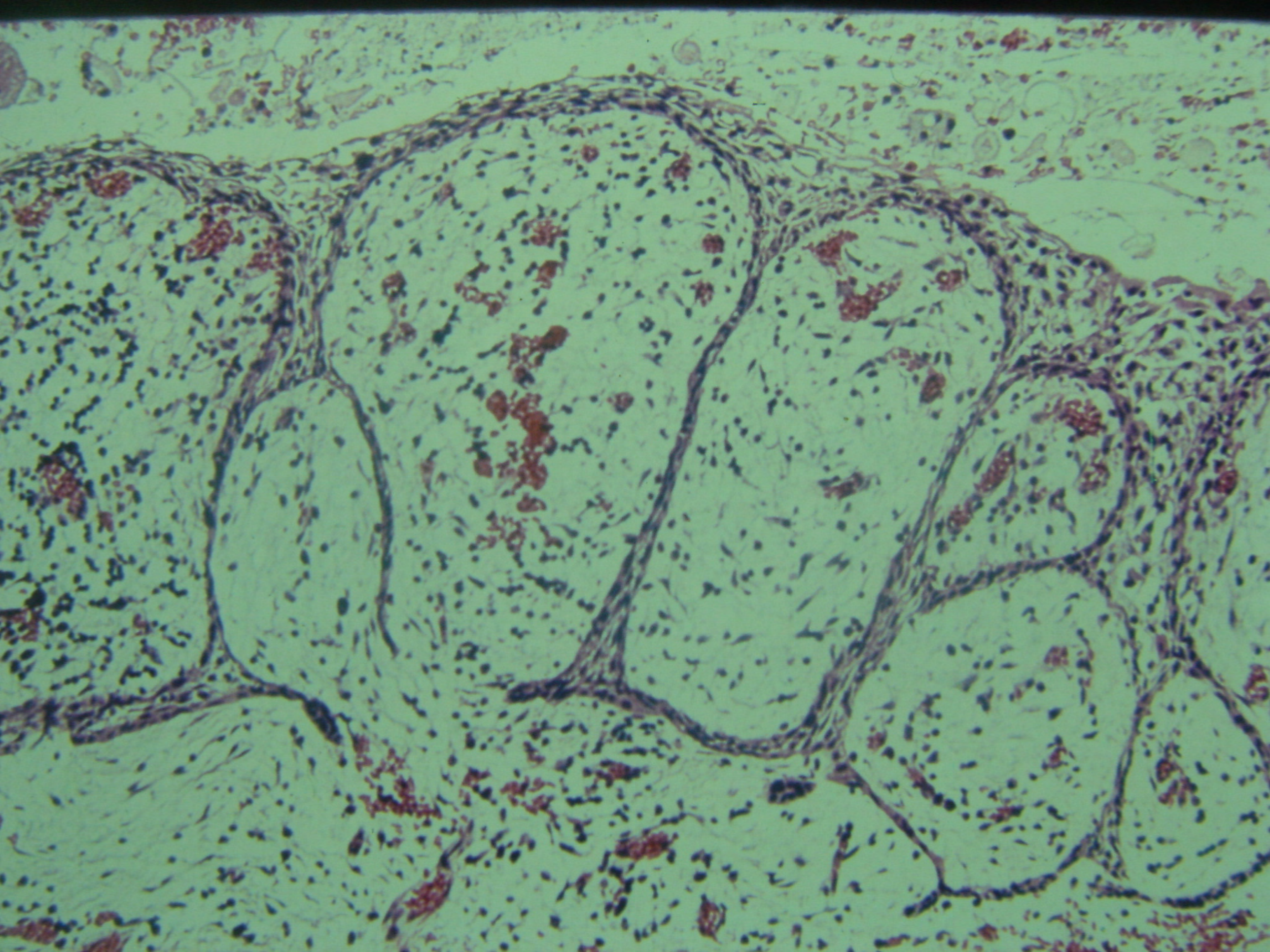


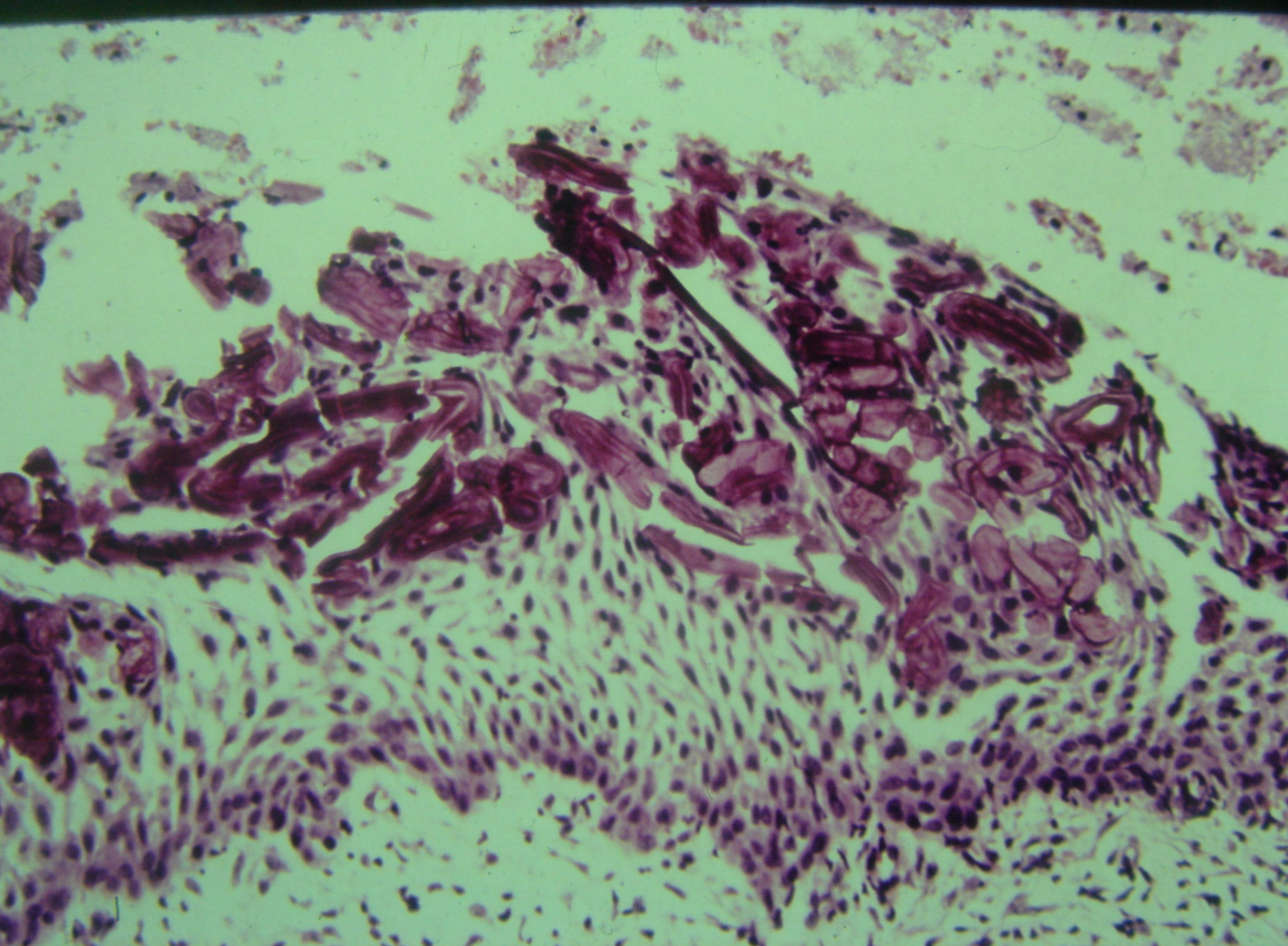


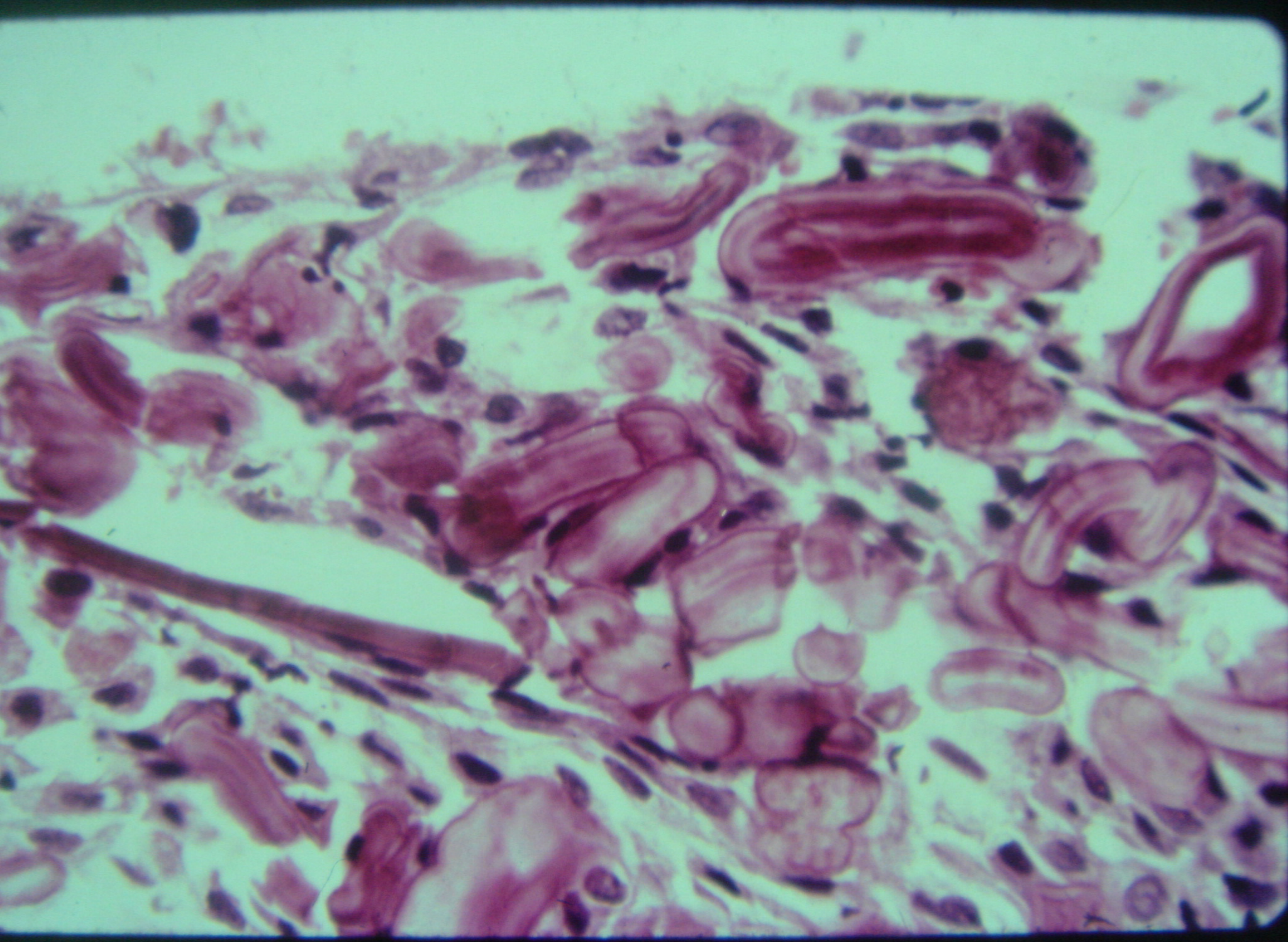


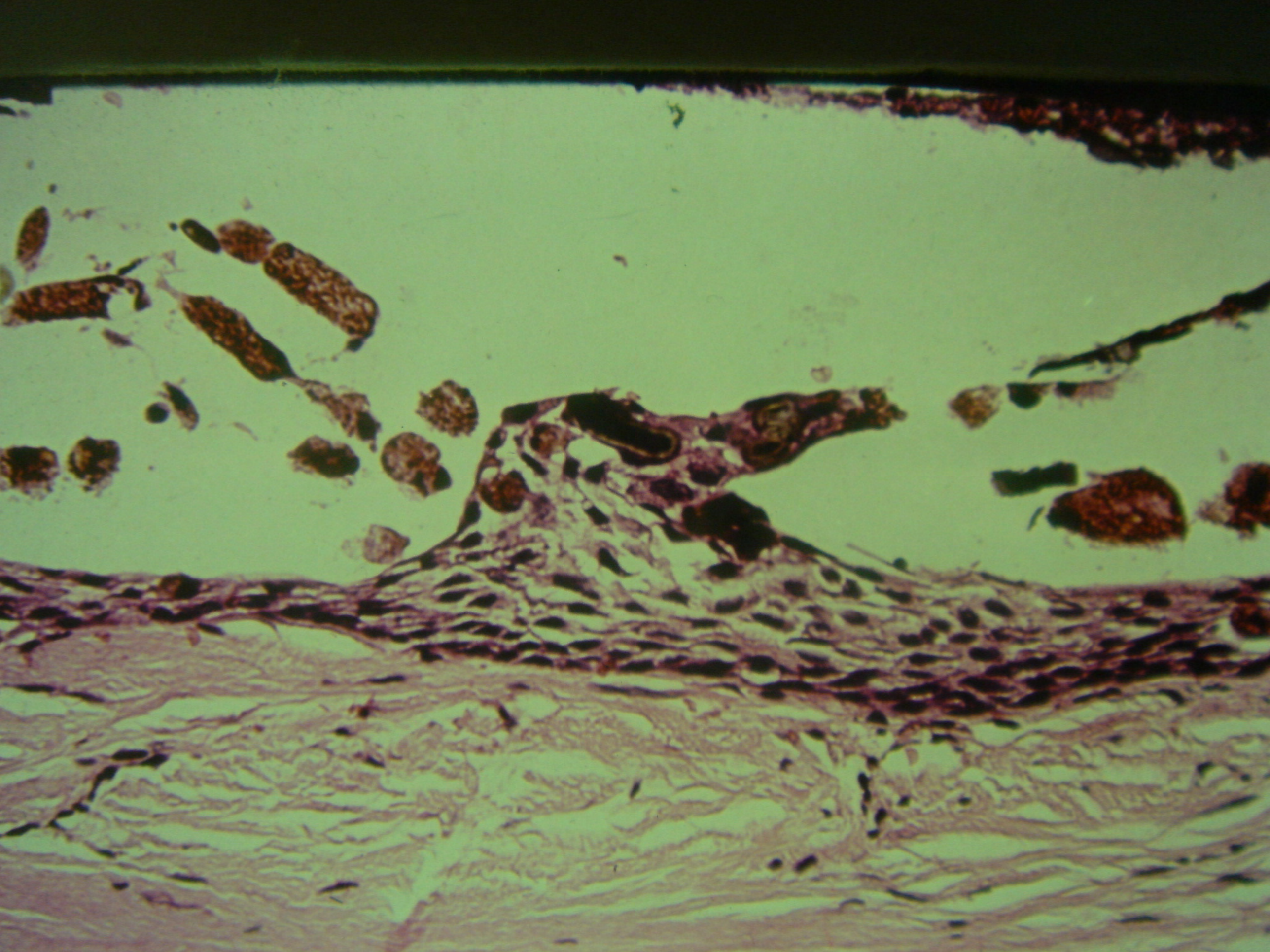


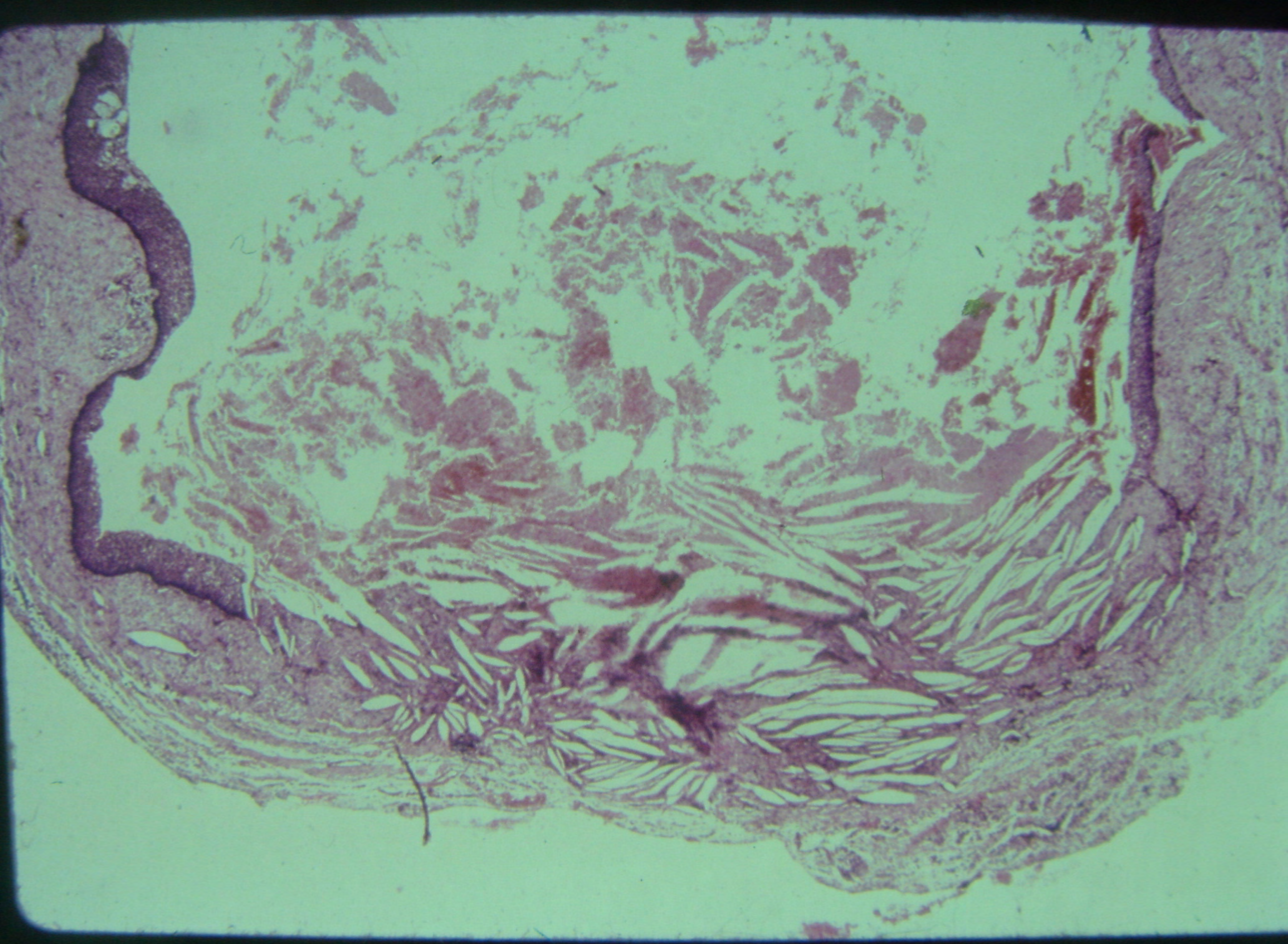














Developmental Cysts

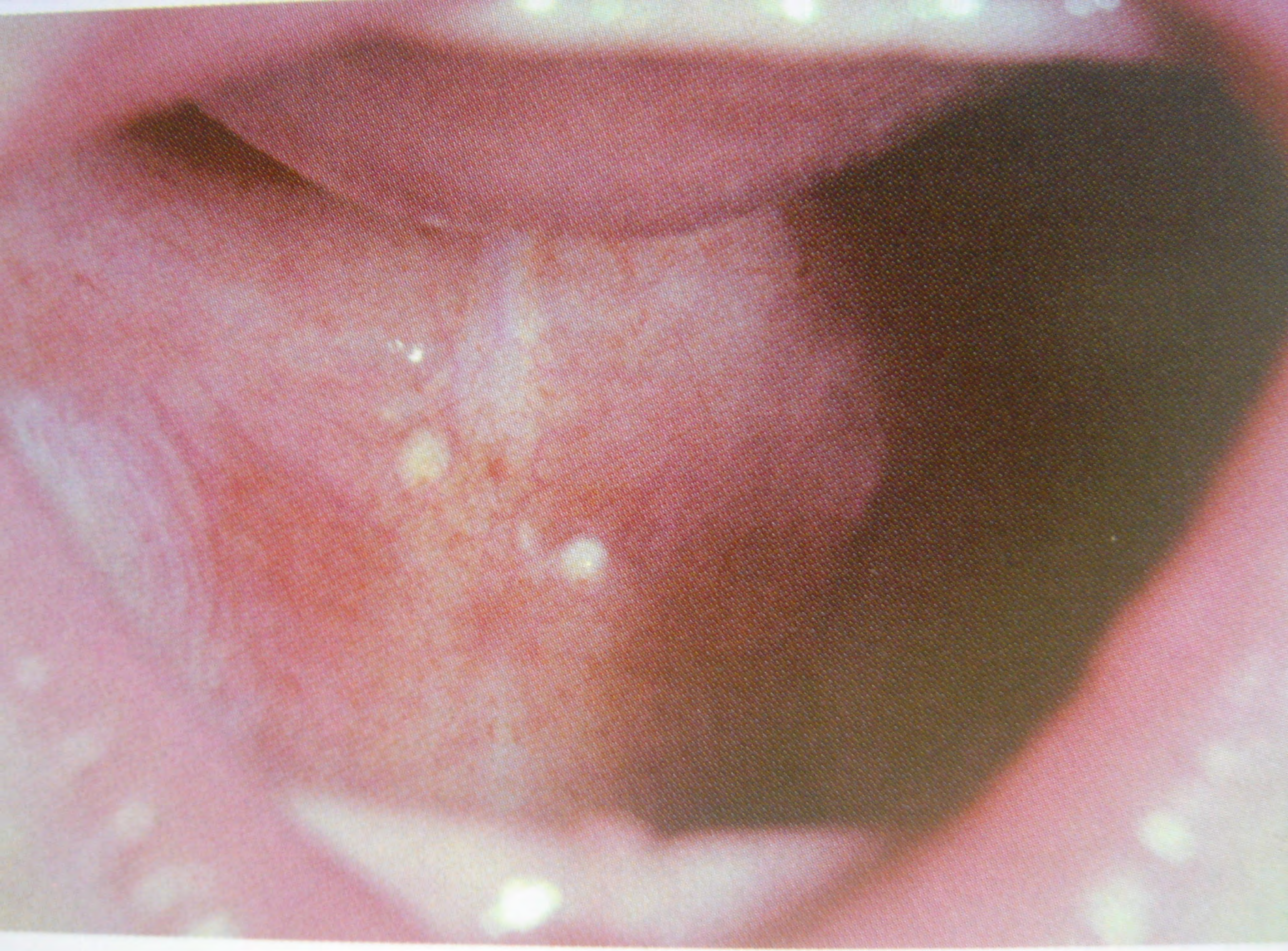
By definition, a **cyst** is a pathologic cavity (often fluid filled) that is lined by epithelium. A number of different developmental cysts of the head and neck have been described. Some of these have been considered historically as "fissural" cysts because they were thought to arise from epithelium entrapped along embryonal lines of fusion. However, the concept of a fissural origin for many of these cysts has been questioned in more recent years. In many instances the exact pathogenesis of these

pressure.

PALATAL CYSTS OF THE NEWBORN (EPSTEIN'S PEARLS; BOHN'S NODULES)

Small developmental cysts are a common finding on th palate of newborn infants. It has been theorized tha these "inclusion" cysts may arise in one of two ways First, as the palatal shelves meet and fuse in the midlin during embryonic life to form the secondary palate, sma islands of epithelium may become entrapped below the surface along the median palatal raphe and form cysts Second, these cysts may arise from epithelial remnants derived from the development of the minor salivary glands of the palate.

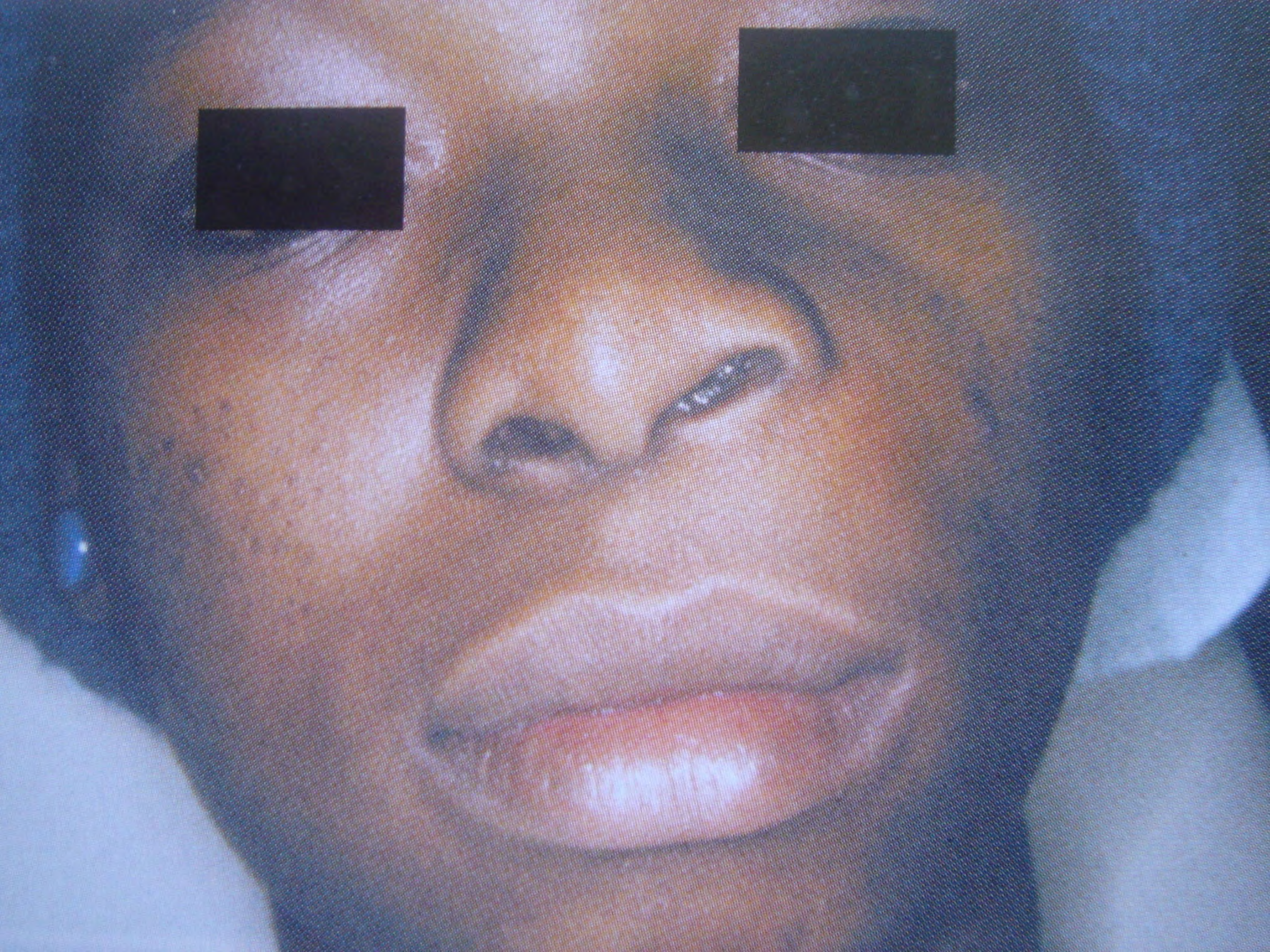
As originally described, **Epstein's pearls** occur along



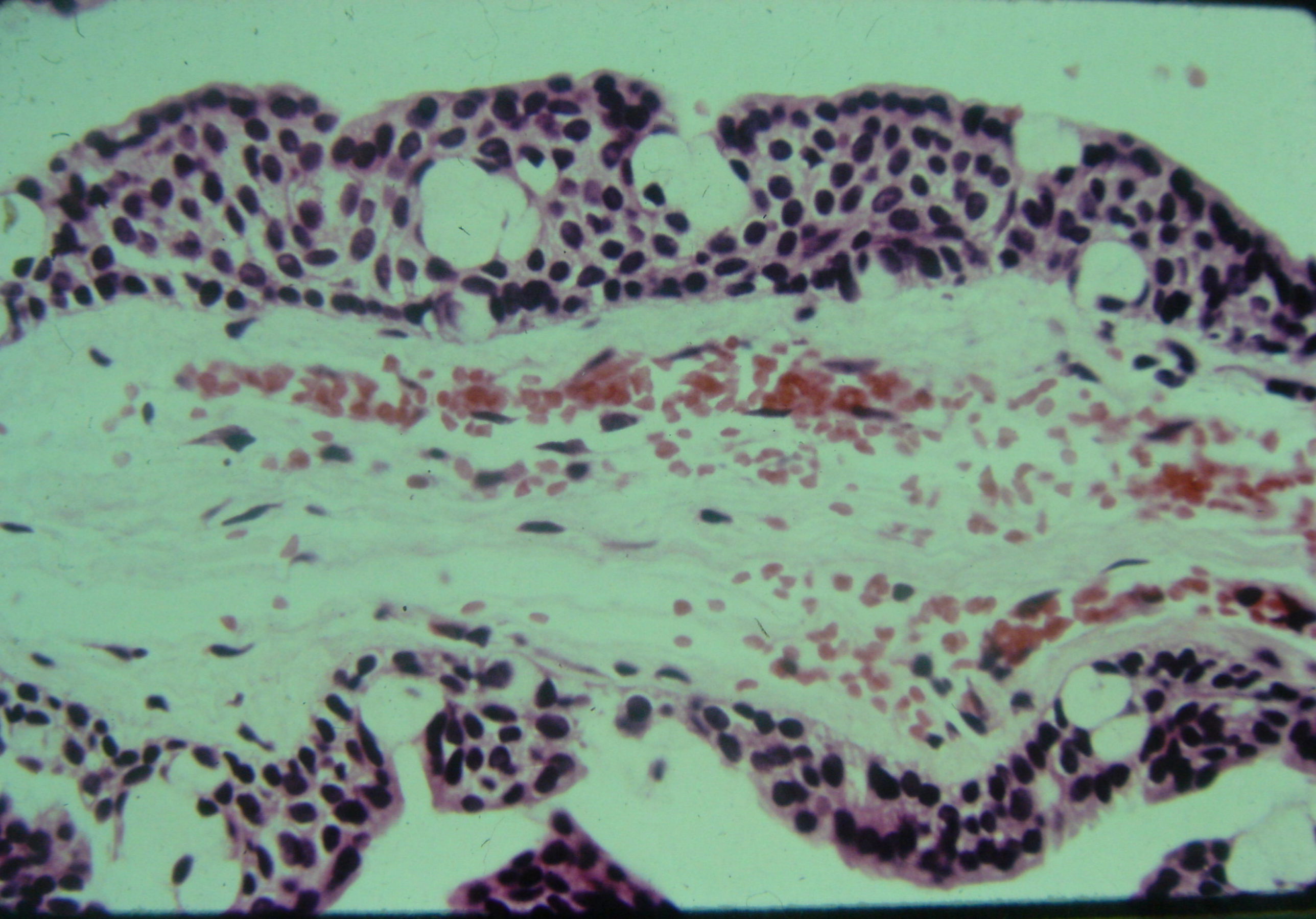
onto the mucosal surface and eliminate their keratin contents.

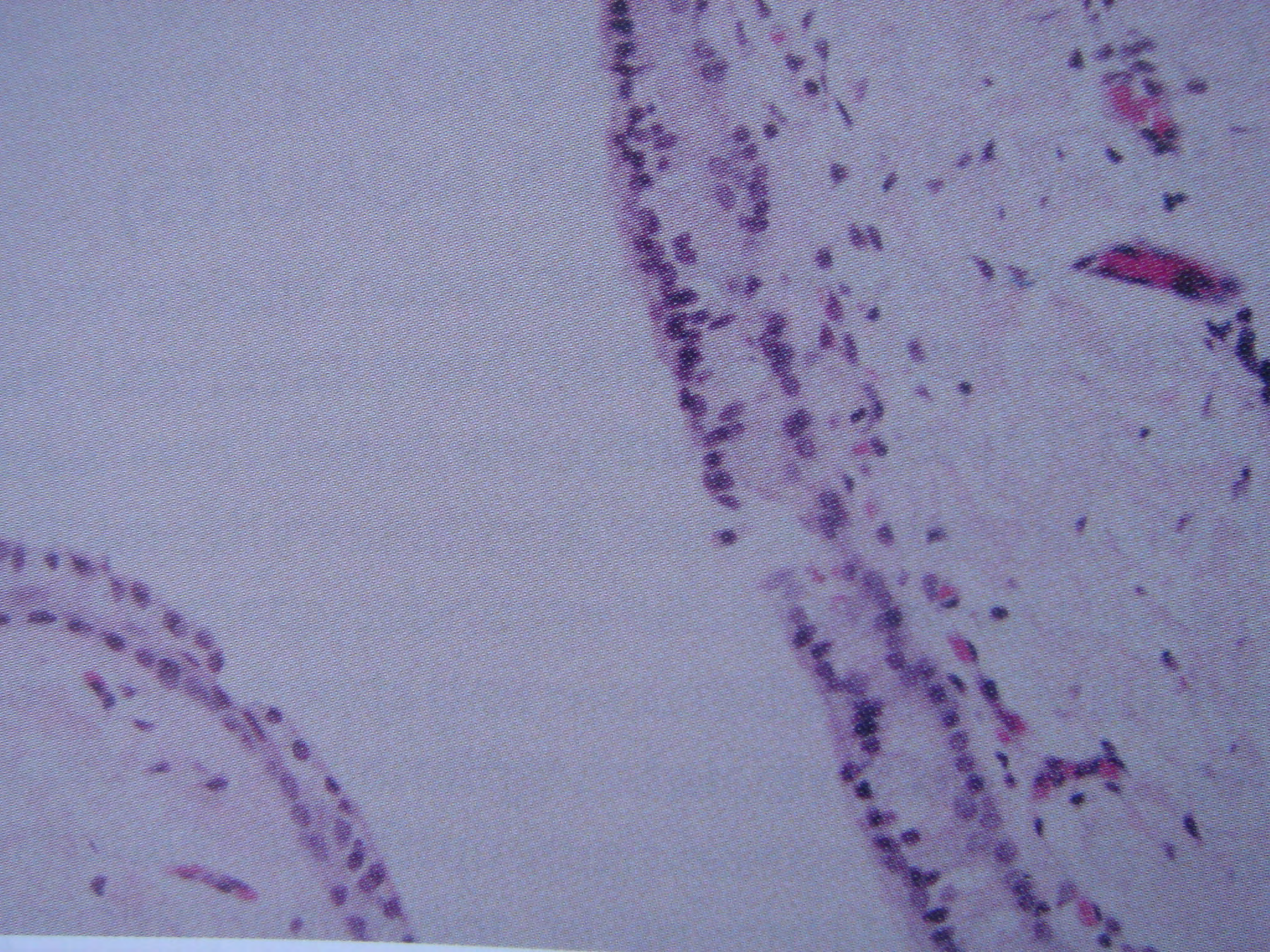
NASOLABIAL CYST (NASOALVEOLAR CYST)

The **nasolabial cyst** is a rare developmental cyst that occurs in the upper lip lateral to the midline. Its pathogenesis is uncertain, although there are two major theories. One theory considers the nasolabial cyst to be a "fissural" cyst arising from epithelial remnants entrapped along the line of fusion of the maxillary, medial nasal, and lateral nasal processes. A second theory suggests that these cysts develop from misplaced epithelium of the nasolacrimal duct because of their similar location and histology.



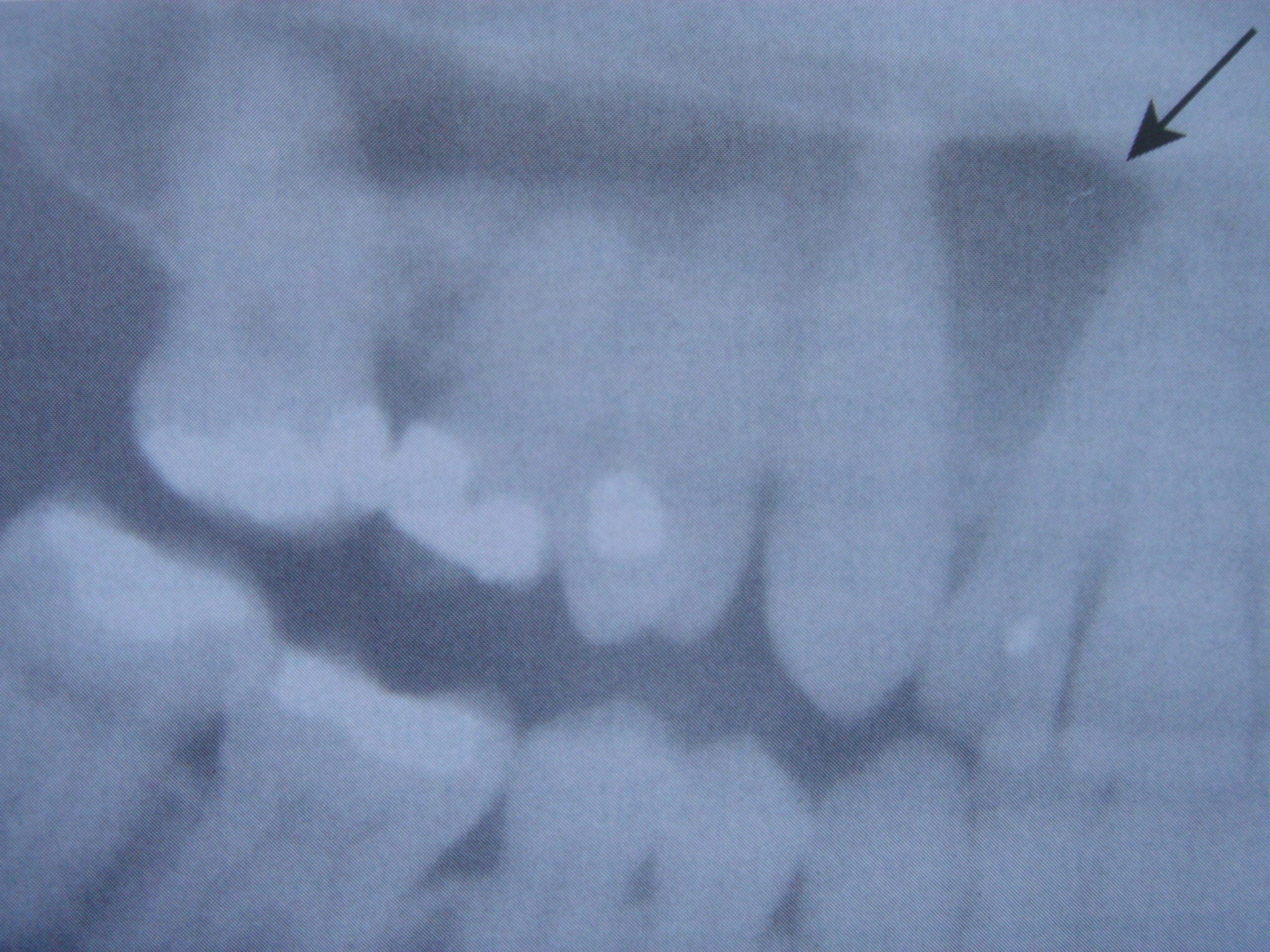






"GLOBULOMAXILLARY CYST"

As originally described, the "**globulomaxillary cyst**" was purported to be a fissural cyst that arose from epithelium entrapped during fusion of the globular portion of the medial nasal process with the maxillary process. This concept has been questioned, however, because the globular portion of the medial nasal process is primarily united with the maxillary process and a fusion does not occur. Therefore, epithelial entrapment should not occur during embryologic development of this area. Current theory holds that most (if not all) cysts that develop in the globulomaxillary area are actually of odontogenic origin.

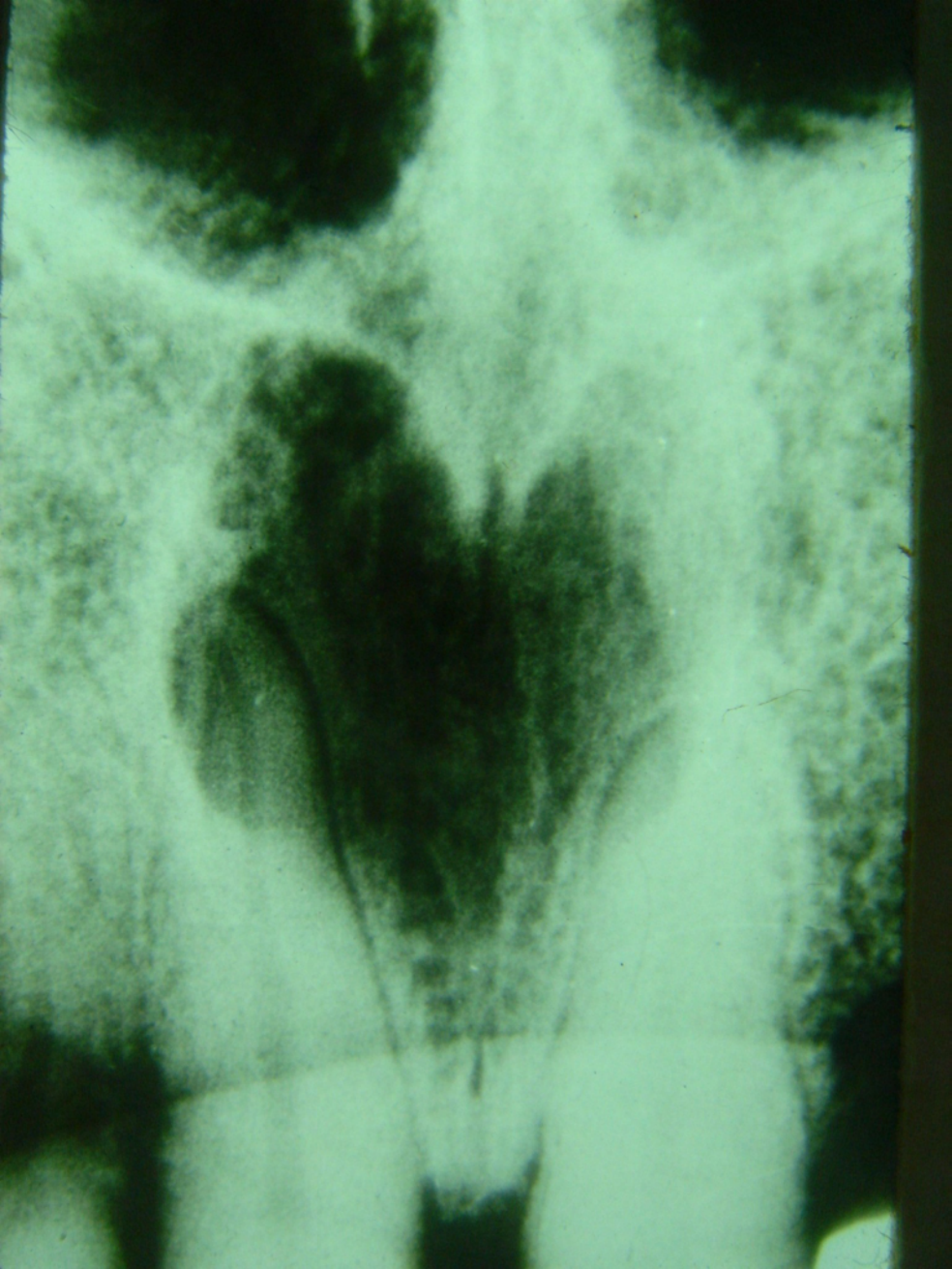


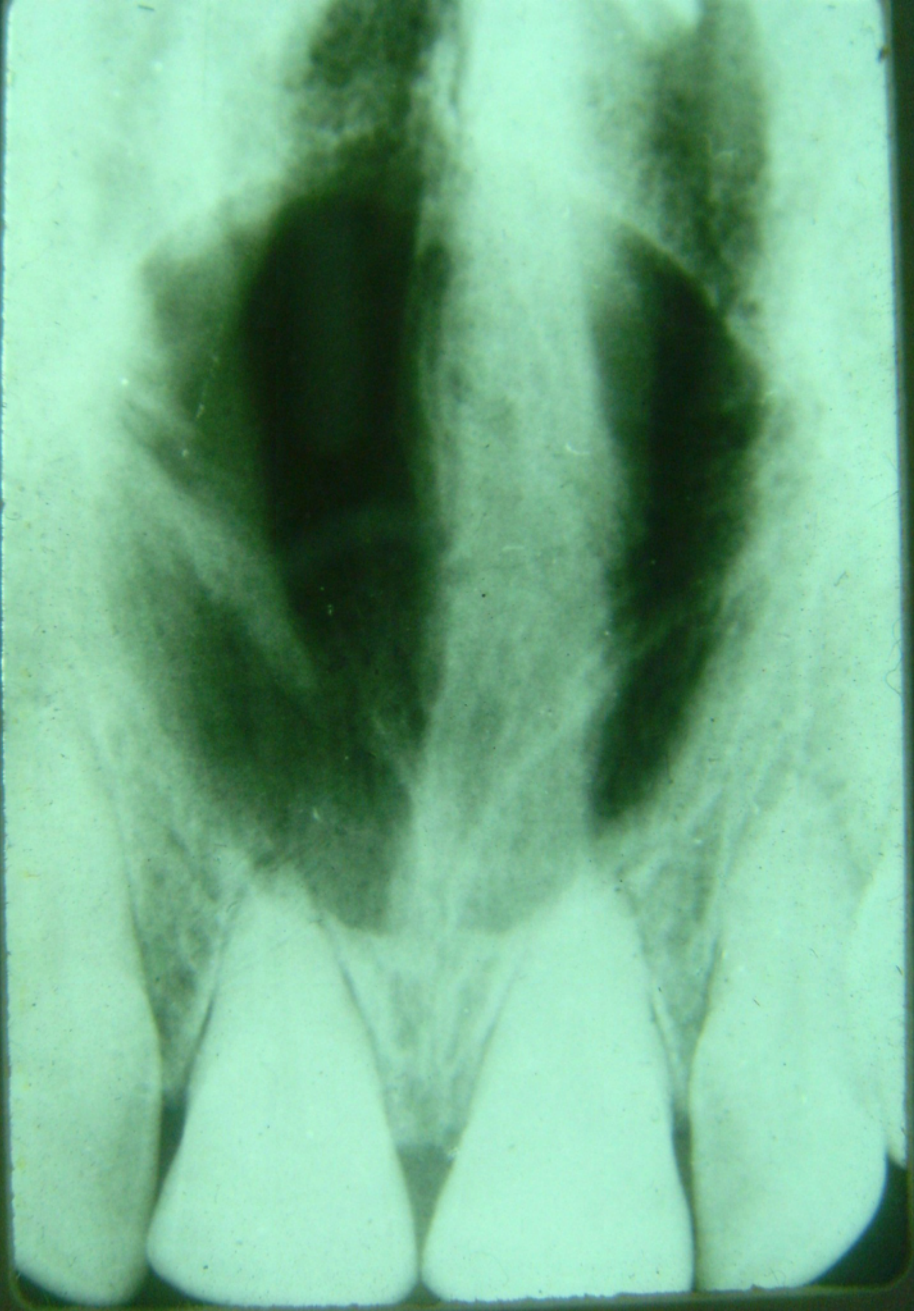
NASOPALATINE DUCT CYST (INCISIVE CANAL CYST)

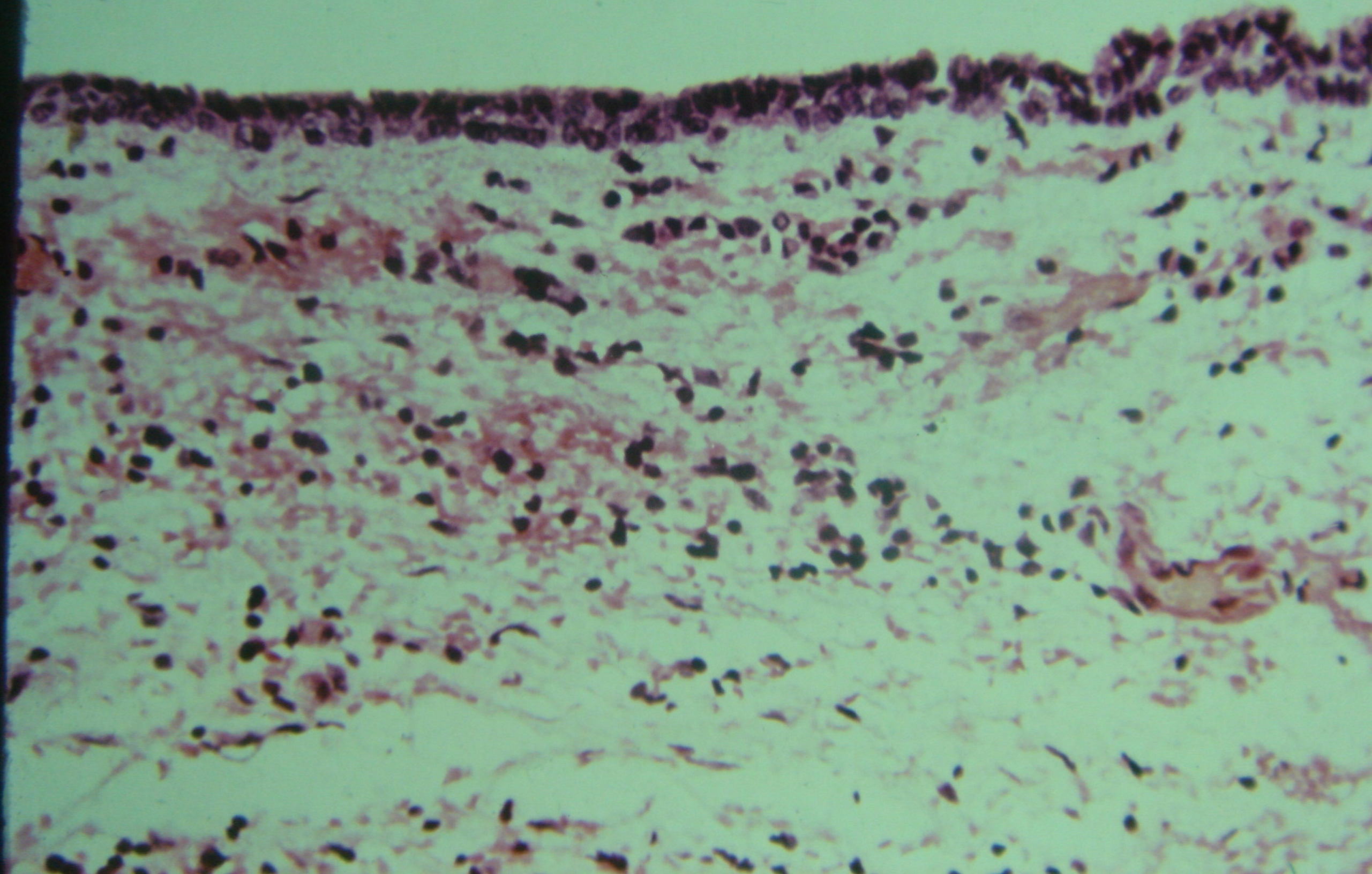
The **nasopalatine duct cyst** is the most common non-odontogenic cyst of the oral cavity, occurring in about 1% of the population. The cyst is believed to arise from remnants of the **nasopalatine duct**, an embryologic structure connecting the oral and nasal cavities in the area of the incisive canal.

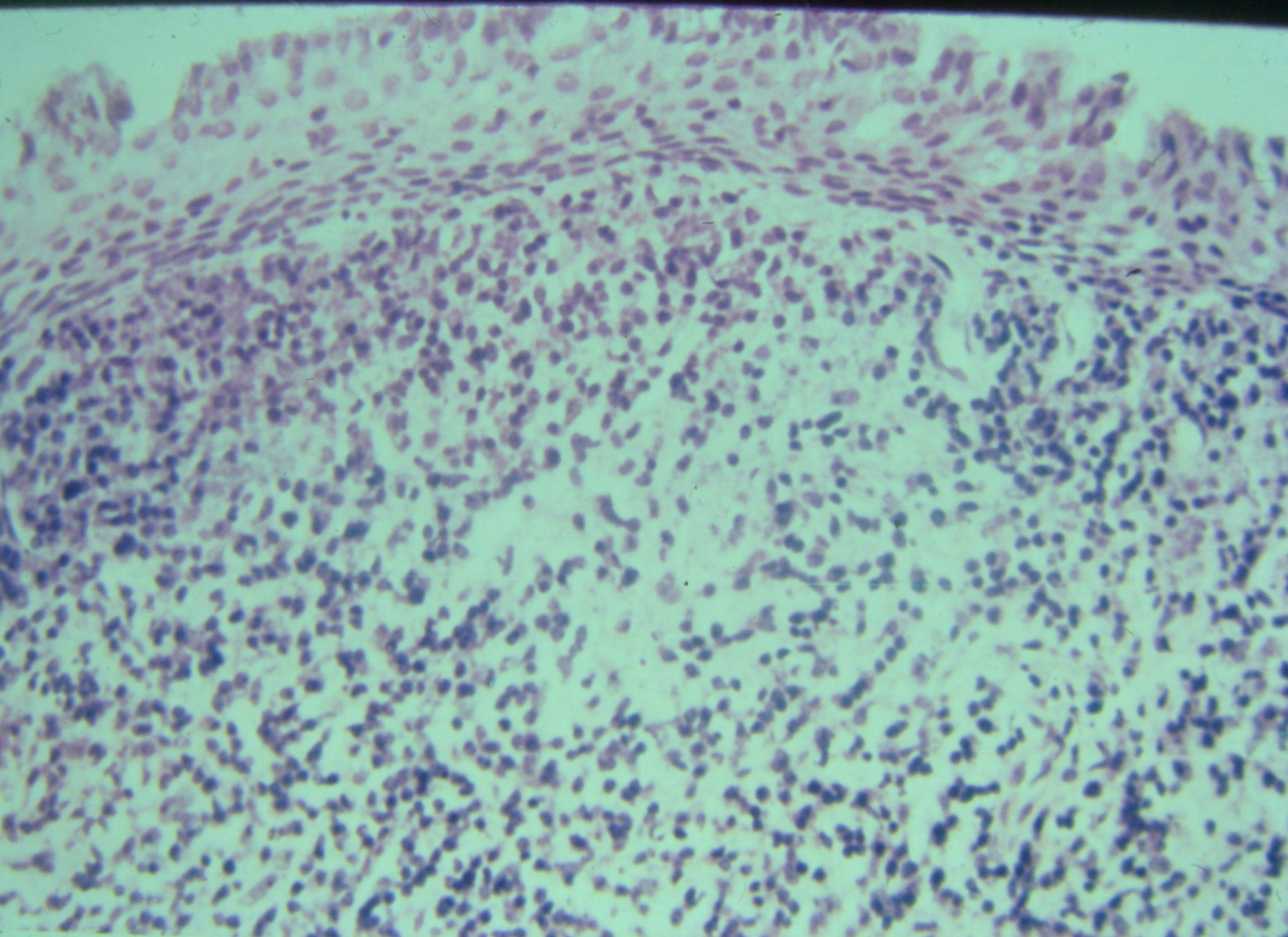
In the 7-week-old fetus, the developing palate consists of the **primary palate**, which is formed by the fusion of the medial nasal processes. Behind the primary palate, downgrowth of the nasal septum produces two communications between the oral and nasal cavities, the primitive nasal choanae. Formation of the **secondary palate**

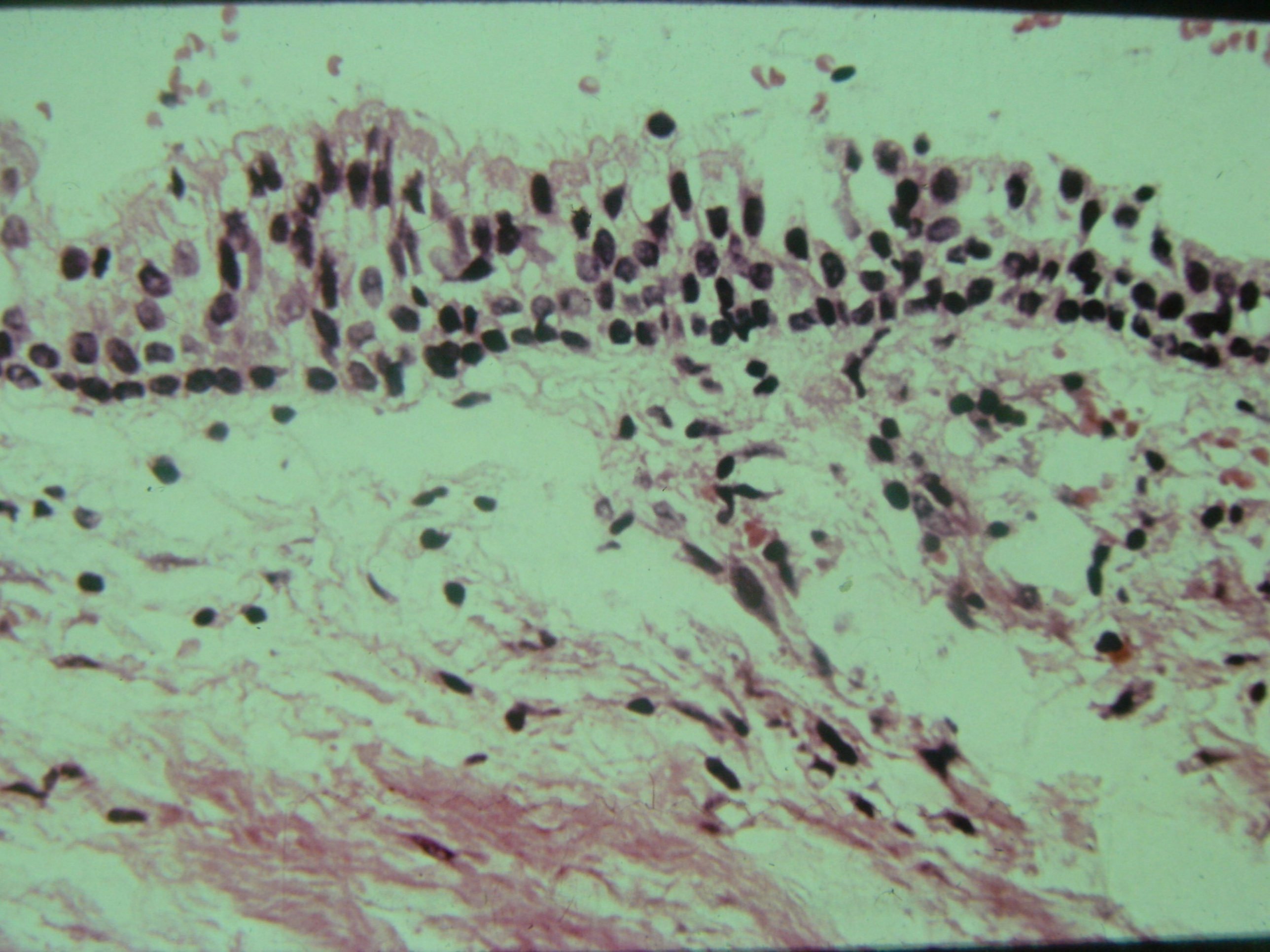


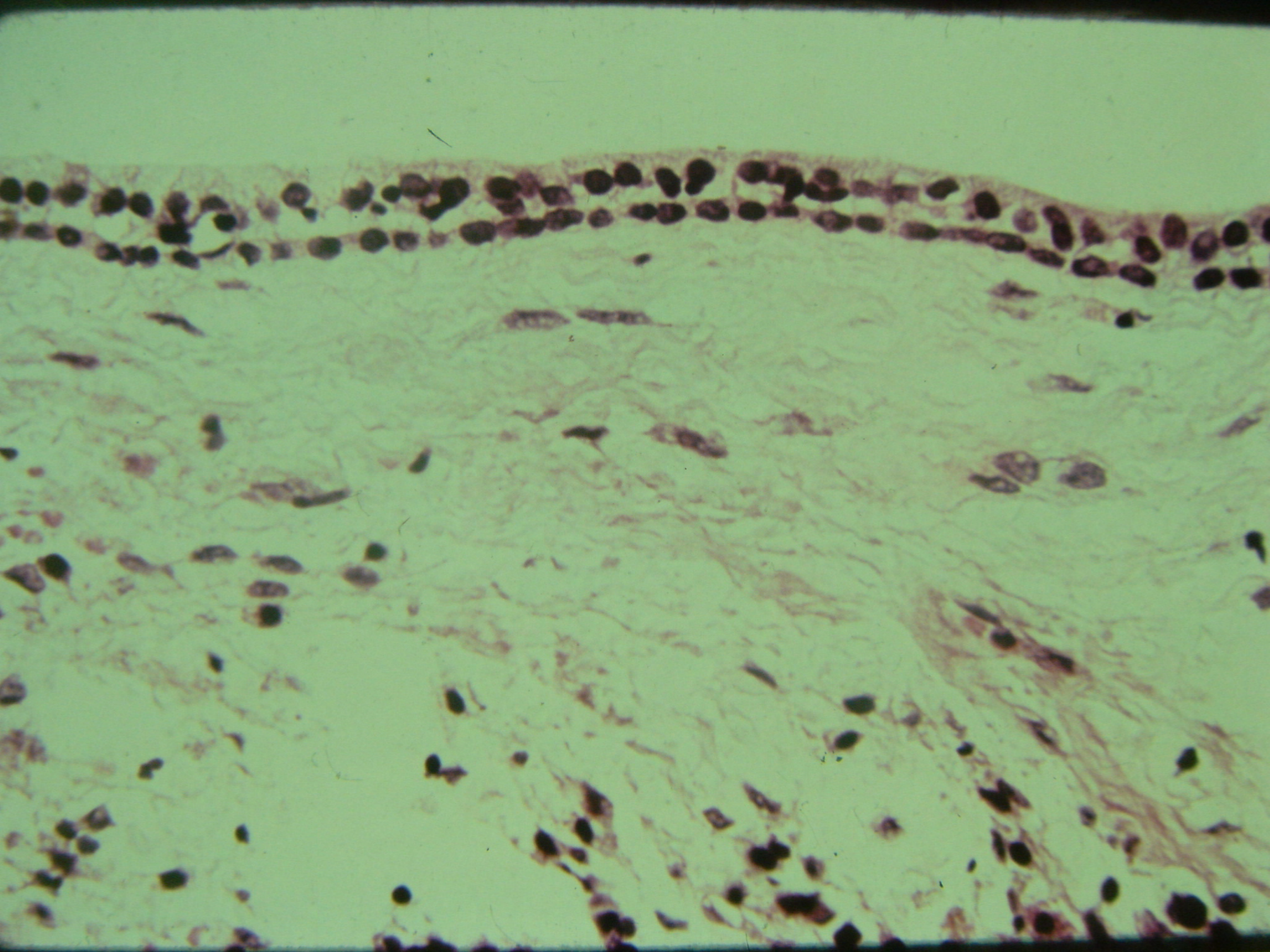


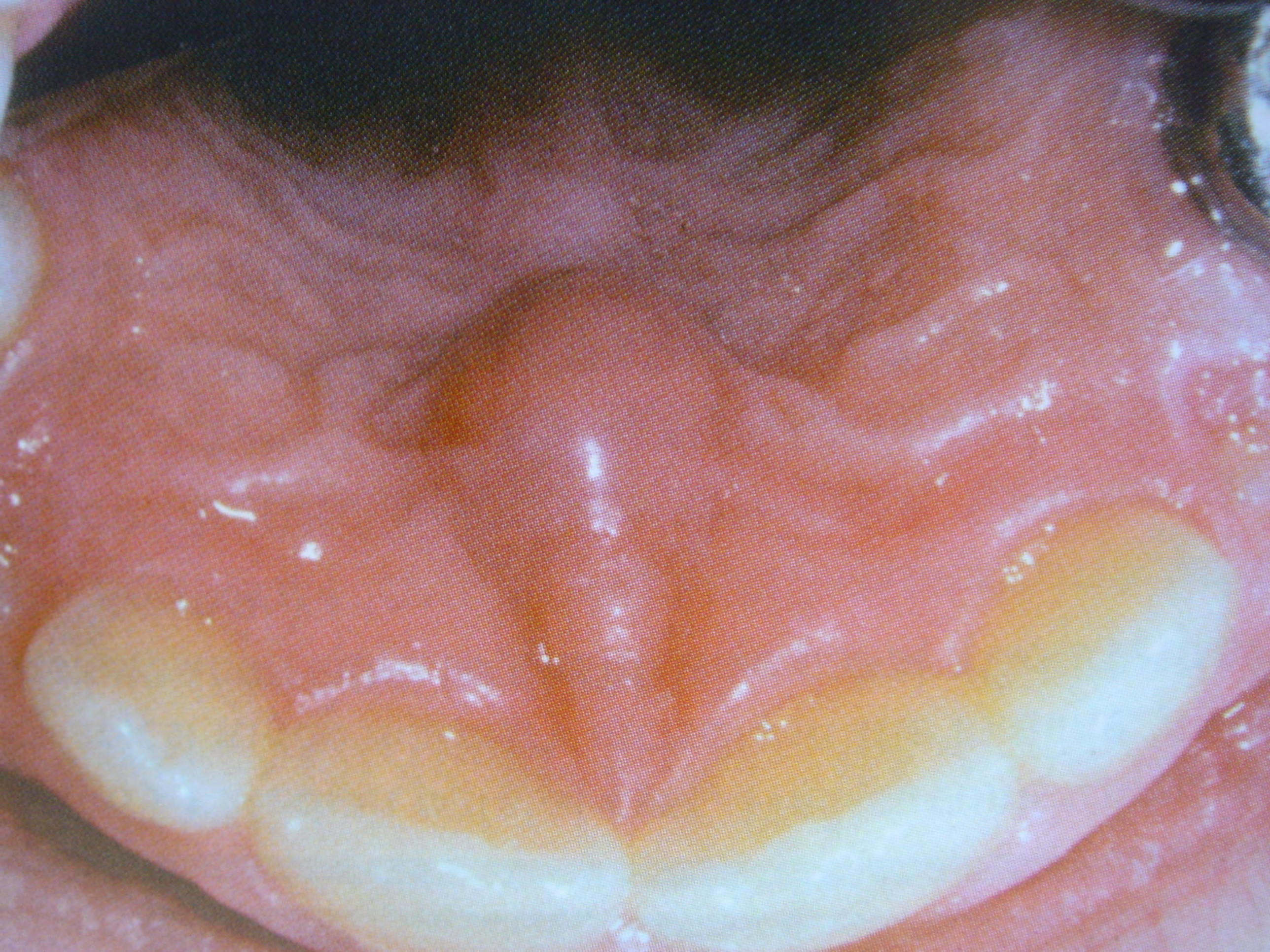












MEDIAN PALATAL (PALATINE) CYST

The **median palatal cyst** is a rare fissural cyst that theoretically develops from epithelium entrapped along the embryonic line of fusion of the lateral palatal shelves of the maxilla. This cyst may be difficult to distinguish from a **nasopalatine duct cyst.** In fact, most "median palatal cysts" may represent posteriorly positioned nasopalatine duct cysts. Because the nasopalatine ducts course posteriorly and superiorly as they extend from the incisive canal to the nasal cavity, a nasopalatine duct cyst that arises from posterior remnants of this duct near the nasal cavity might be mistaken for a median palatal cyst. On the other hand, if a true median palatal cyst were to develop toward the anterior portion of the hard palate, it



"MEDIAN MANDIBULAR CYST"

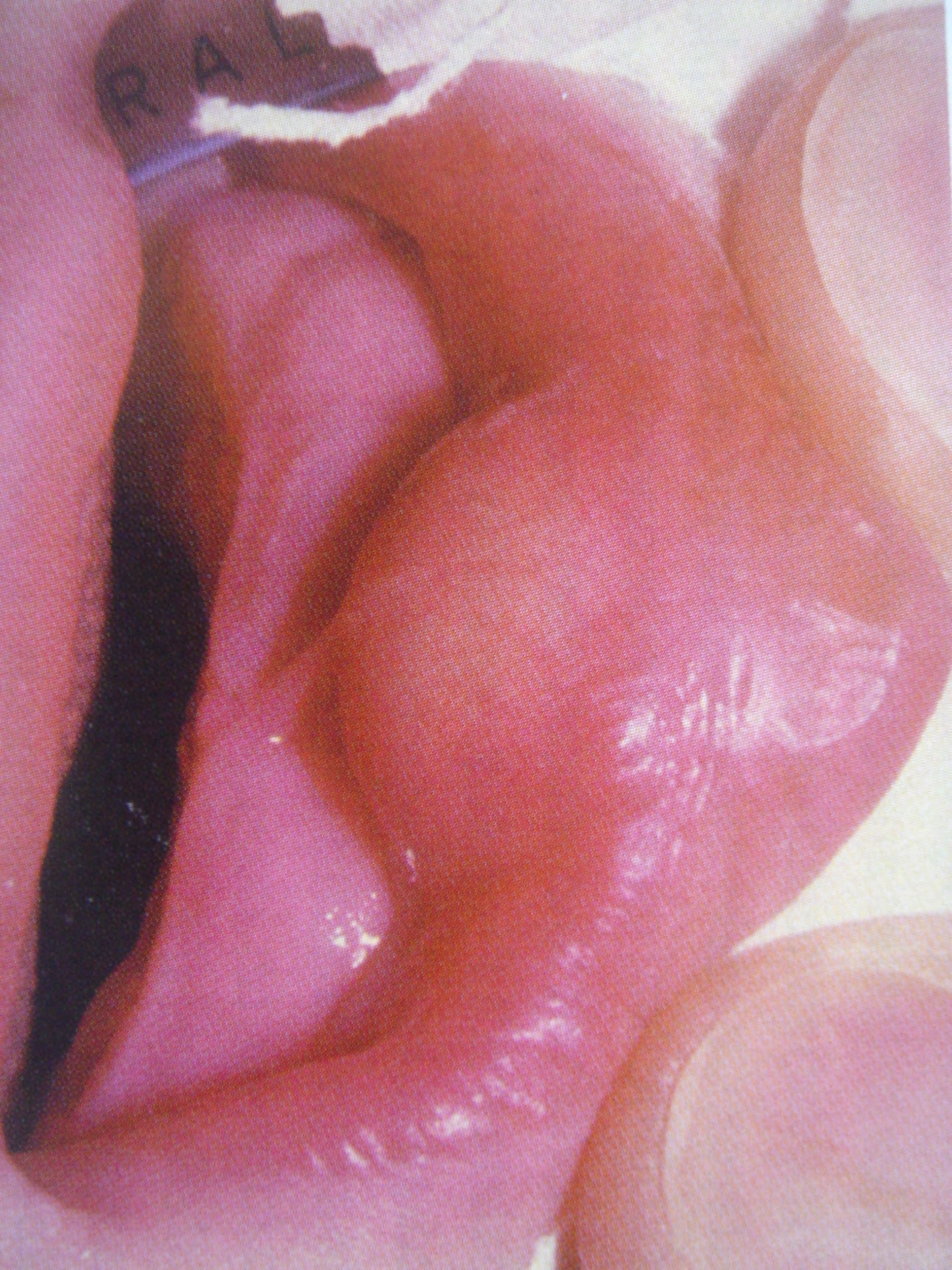
The "**median mandibular cyst**" is a controversial lesion of questionable existence. Theoretically, it represents a fissural cyst in the anterior midline of the mandible that develops from epithelium entrapped during fusion of the halves of the mandible during embryonic life. However, the mandible actually develops as a single bilobed proliferation of mesenchyme with a central isthmus in the midline. As the mandible develops, this isthmus is eliminated. Therefore because no fusion of epithelium-lined processes occurs, entrapment of epithelium should not be possible. For this reason it appears likely that most (if not all) of these midline cysts are of odontogenic origin.

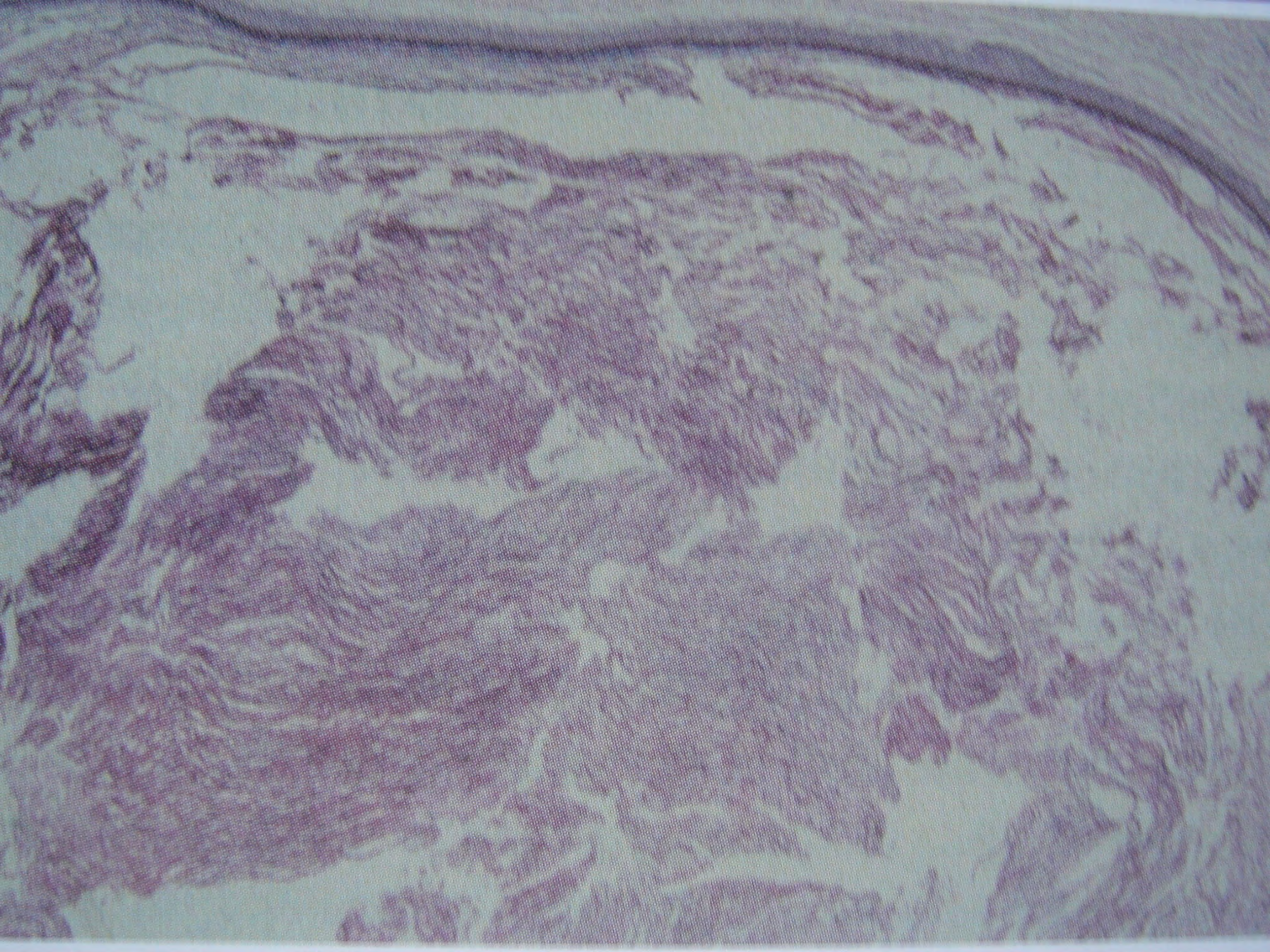
most cases.

EPIDERMOID CYST OF THE SKIN

The **epidermoid cyst** is a common cyst of the skin tha is lined by epidermis-like epithelium. Most epidermoi cysts are derived from the follicular infundibulum an also are called **infundibular cysts.** These cysts ofte arise after localized inflammation of the hair follicle an probably represent a nonneoplastic proliferation of th infundibular epithelium resulting from the healing process. The term **sebaceous cyst** sometimes is used mistakenly as a synonym for both the epidermoid cys and another cyst of the scalp known as a **pilar, tricho-lemmal,** or **isthmus-catagen cyst.** However, because both the epidermoid cyst and pilar cyst are derived from





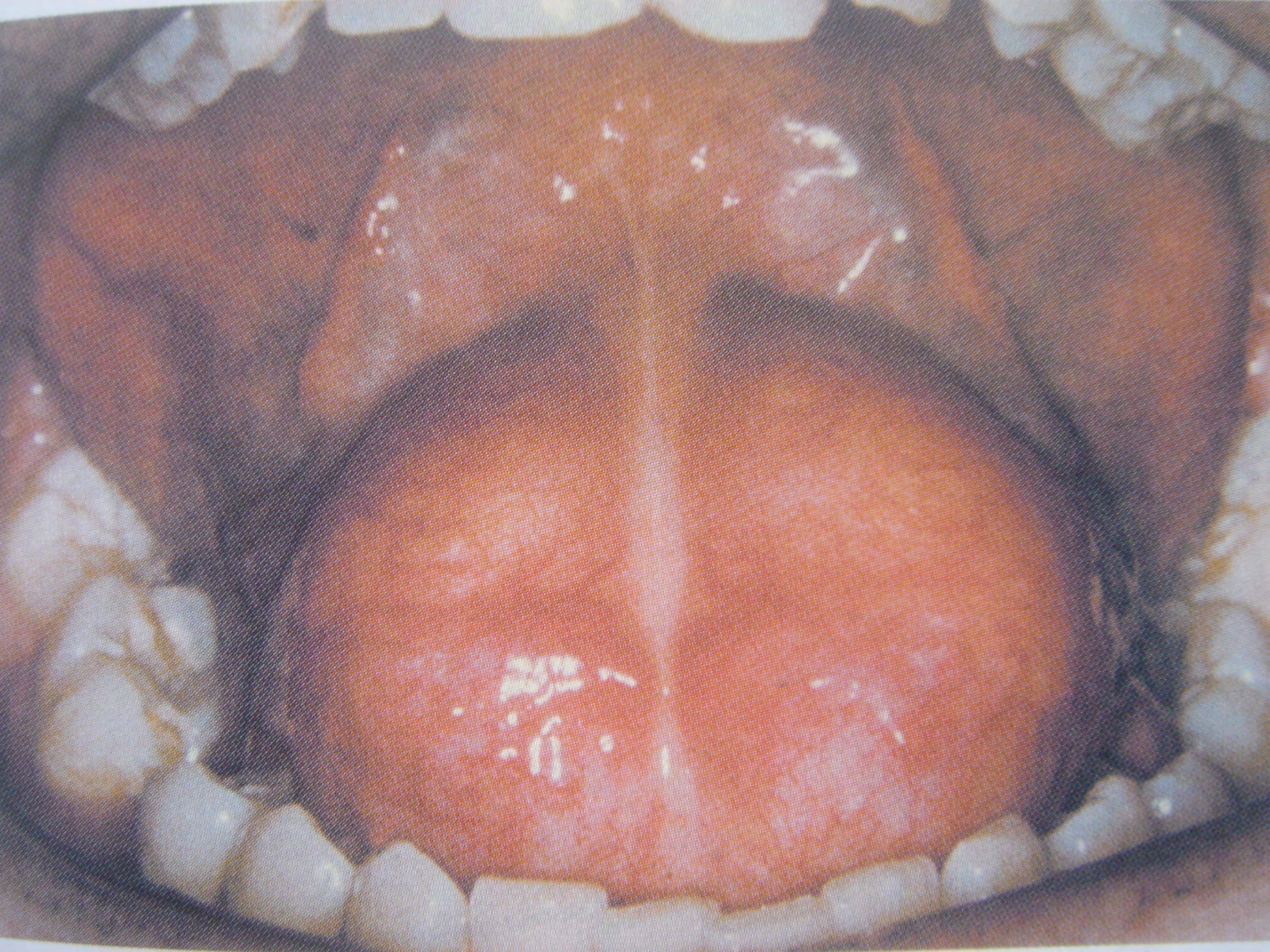


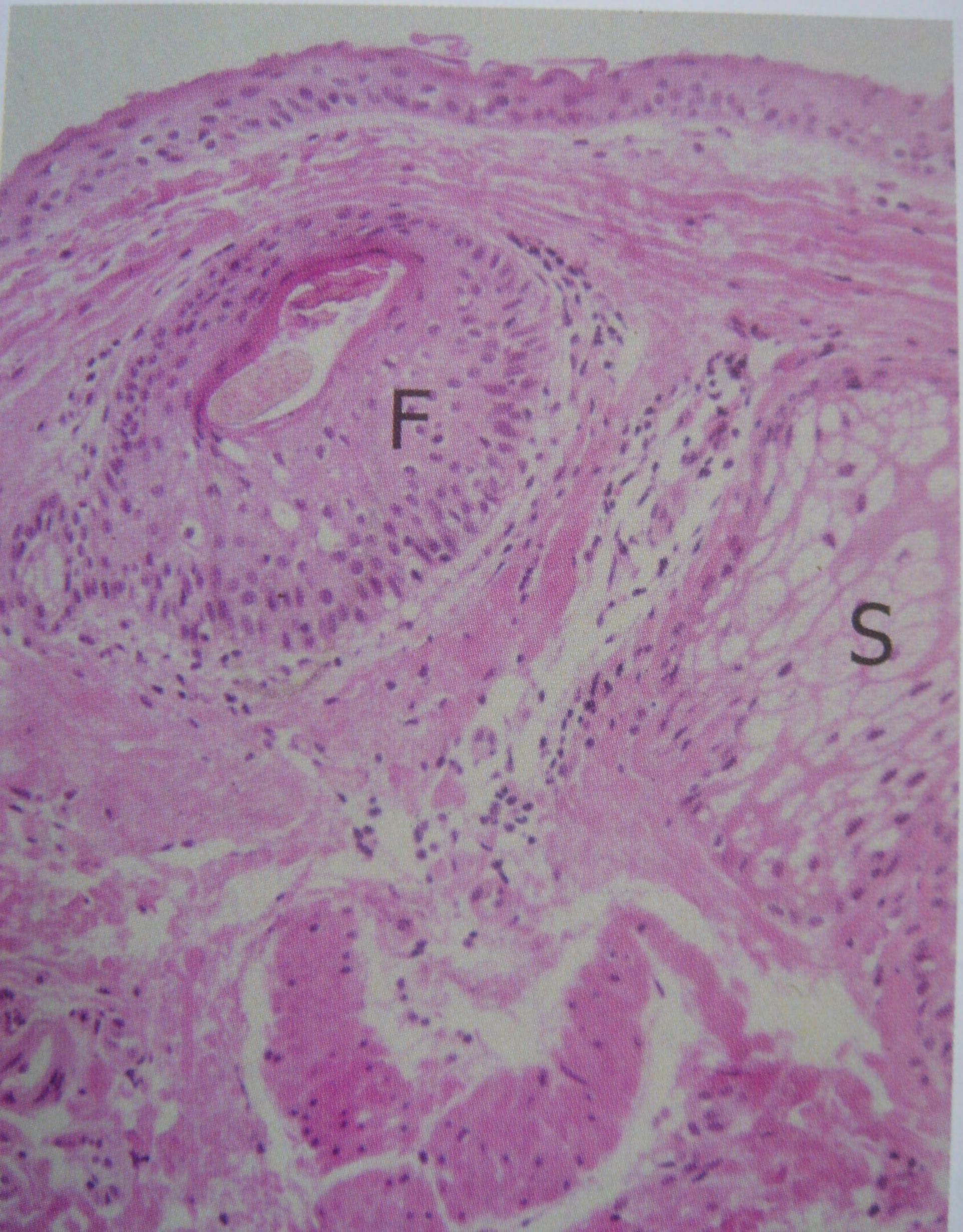
DERMOID CYST

The **dermoid cyst** is an uncommon developmental cyst malformation. The cyst is lined by epidermis-like epithelium and contains dermal adnexal structures in the cyst wa It is generally classified as a benign cystic form of **teratom**

By definition, a true teratoma is a developmental tumo composed of tissue from all three germ layers: ectoderm mesoderm, and endoderm. Such tumors are believed t arise from germ cells or entrapped totipotent blastomere which can produce derivatives of all three germ layers.

Teratomatous malformations have a spectrum of com plexity. In their most complex form, these lesions produc multiple types of tissue that are arranged in a disorganized fashion. These "complex" teratomas are most common in




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S

THYROGLOSSAL DUCT CYST (THYROGLOSSAL TRACT CYST)

The thyroid gland begins its development at the end
the third week of embryonic life as a proliferation
endodermal cells from the ventral floor of the pharyn
between the tuberculum impar and copula of the deve
oping tongue—a point that later becomes the forame
cecum. This thyroid anlage descends into the neck as
bilobed diverticulum anterior to the developing hyoi
bone and reaches its definitive level below the thyroi
cartilage by the seventh embryonic week. Along this path
of descent an epithelial tract or duct is formed, main-
taining an attachment to the base of the tongue. This thy-
roglossal duct becomes intimately associated with the

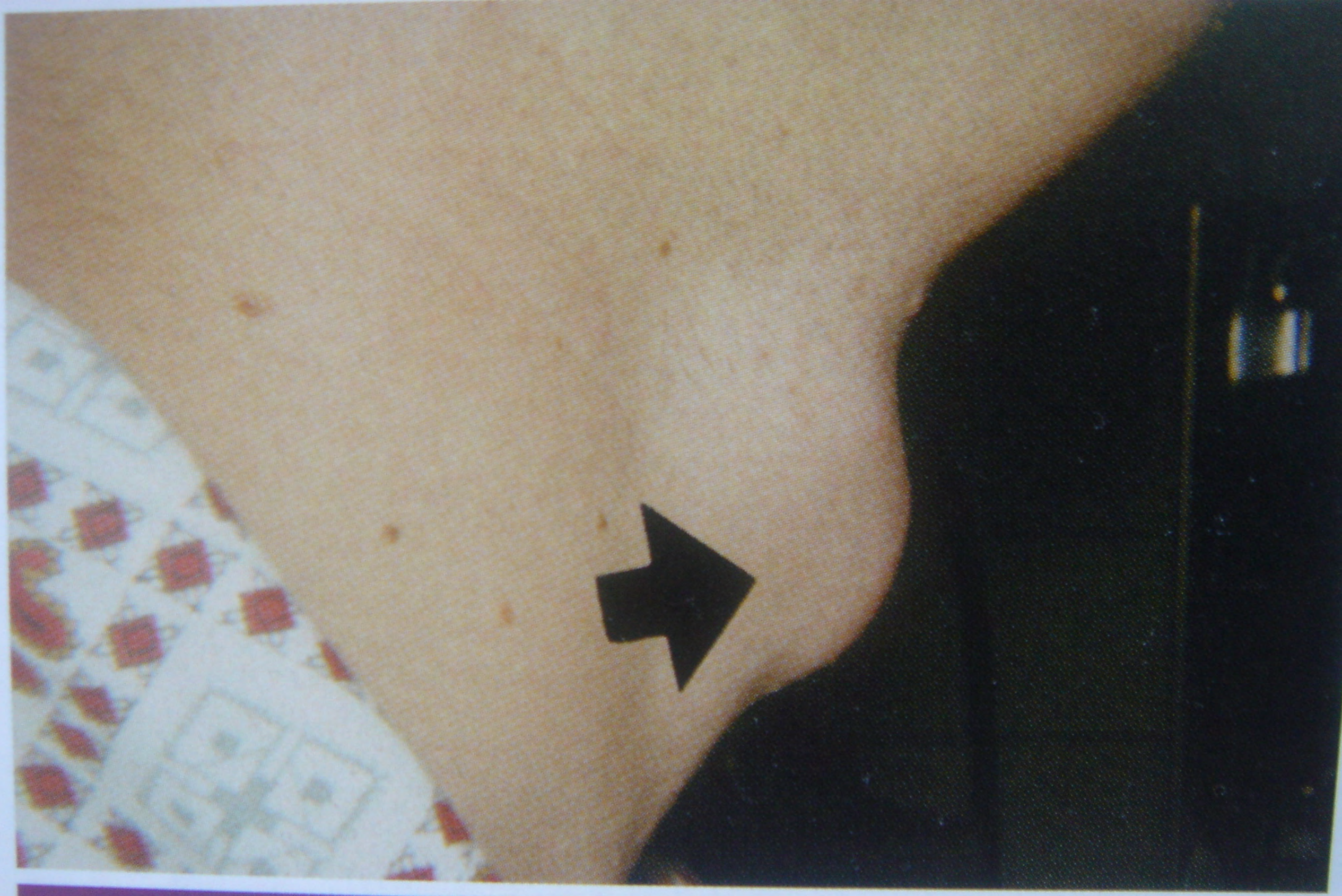
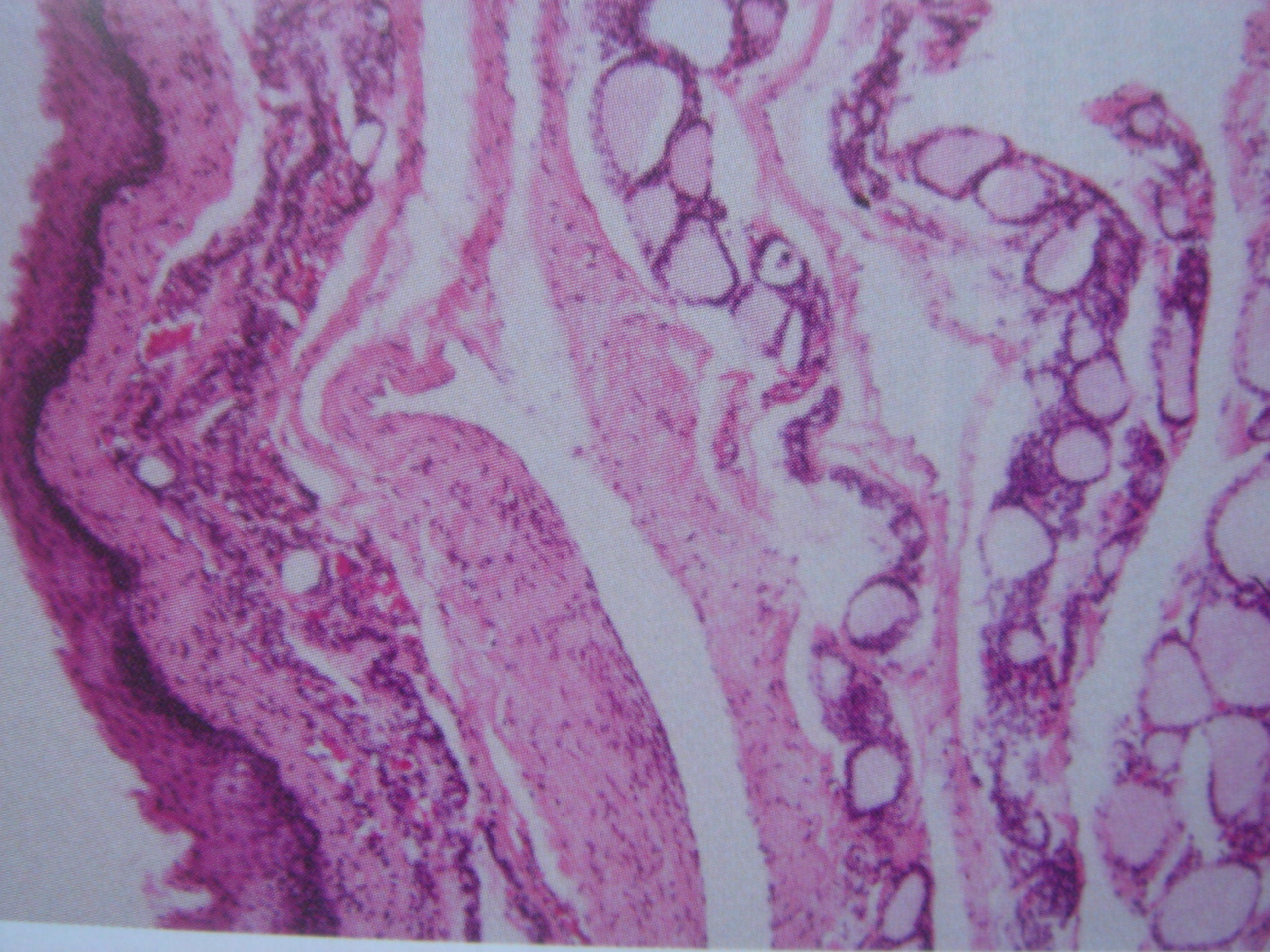


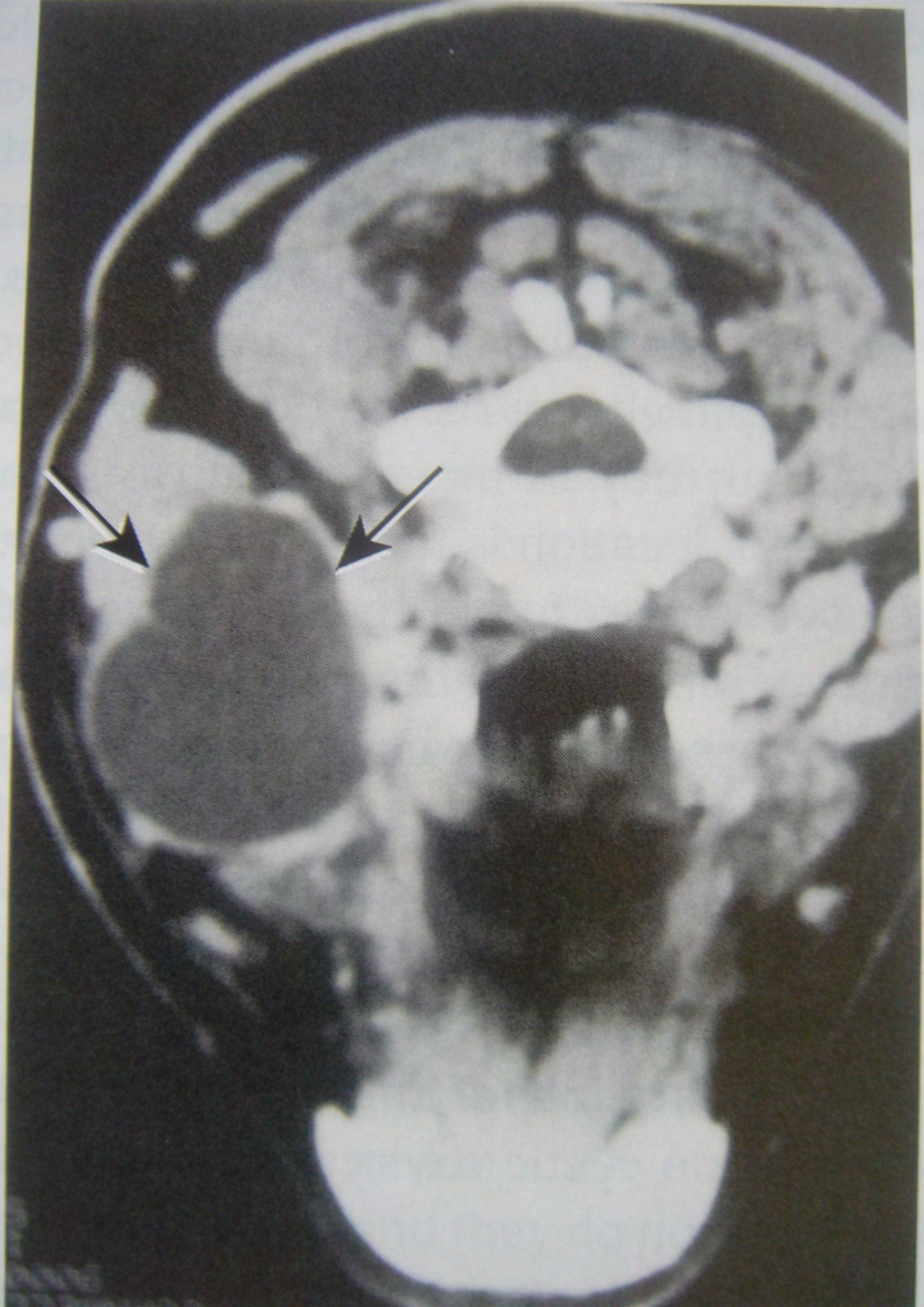
Figure 1-69 ◆ Thyroglossal duct cyst. Swelling *(arrow)* of the anterior midline of the neck. (Courtesy of Dr. Philip Sprinkle.)



BRANCHIAL CLEFT CYST (CERVICAL LYMPHOEPITHELIAL CYST)

The **branchial cleft cyst**, a developmental cyst of the lat
eral neck, has a disputed pathogenesis. The classic theor
holds that the cyst develops from remnants of th
branchial clefts because it occurs in the area of th
embryonic gill arch apparatus. A second theory considers
that it arises from cystic changes in parotid gland epithe-
lium that becomes entrapped in the upper cervical lymph
nodes during embryonic life.

Figure 1-71 ◆ **Cervical lymphoepithelial cyst.** Fluctuant swelling



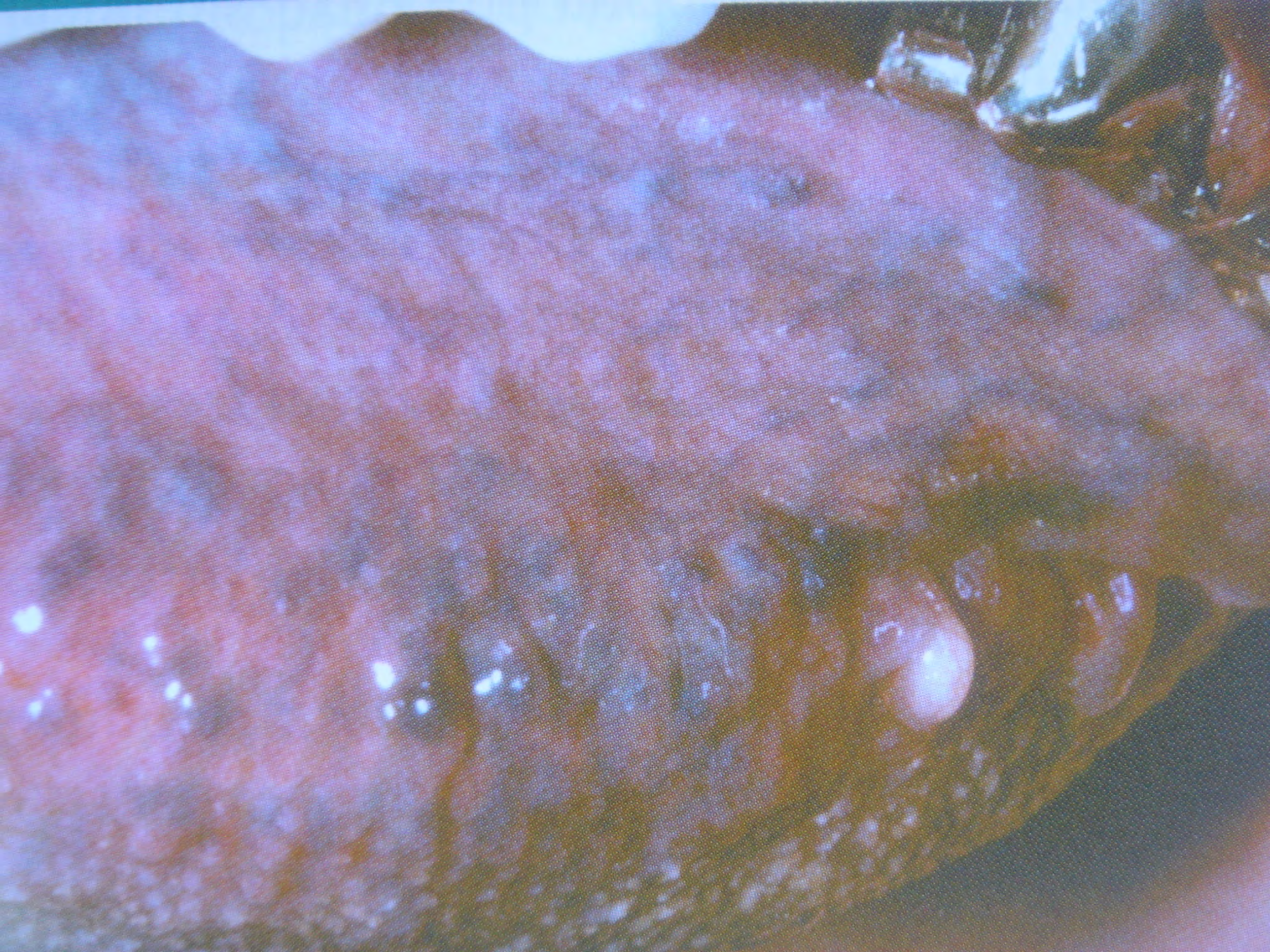
ORAL LYMPHOEPITHELIAL CYST

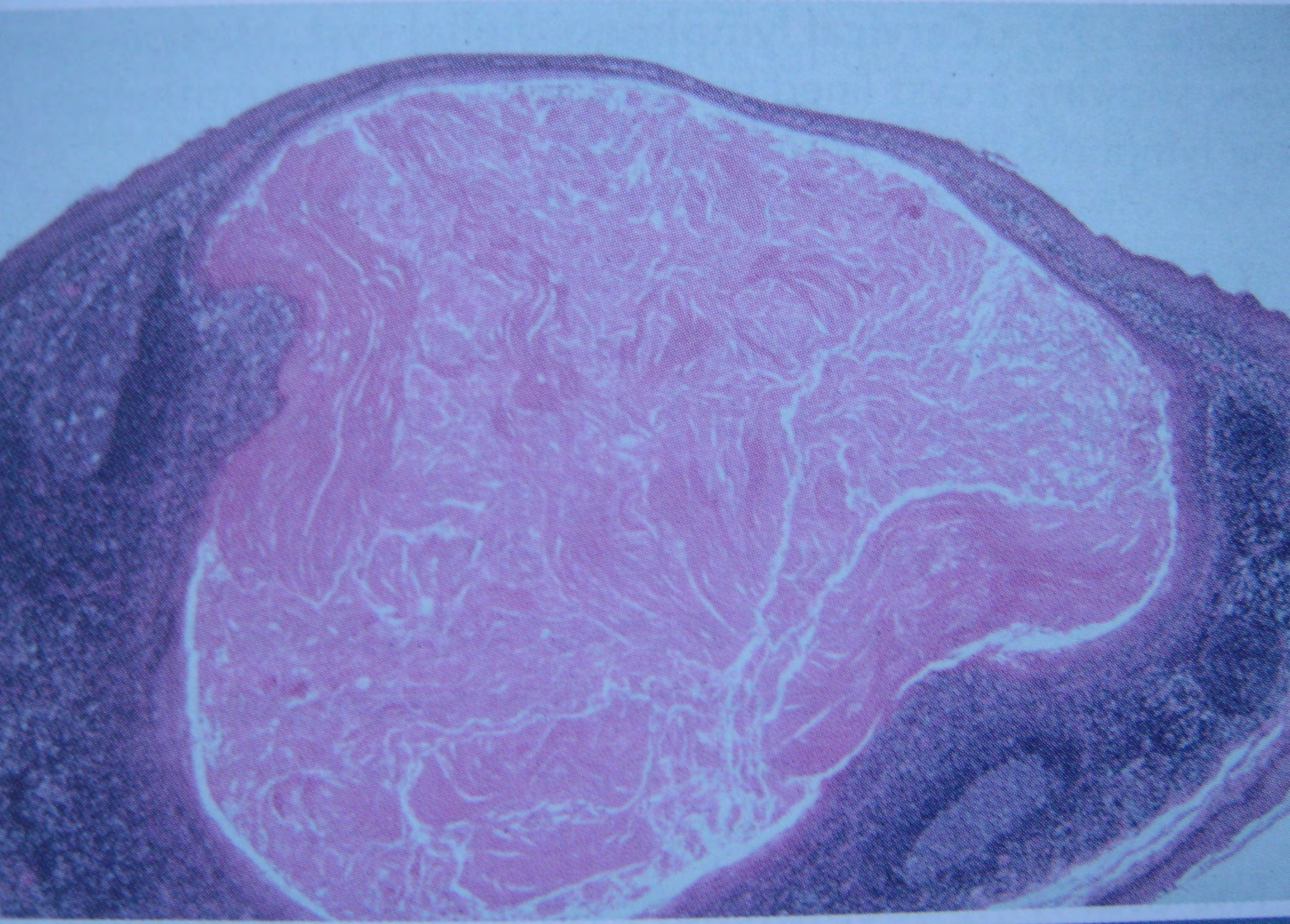
The **oral lymphoepithelial cyst** is an uncommon lesion of the mouth that develops within oral lymphoid tissue. It is microscopically similar to the branchial cleft cyst (cervical lymphoepithelial cyst) but much smaller in size.

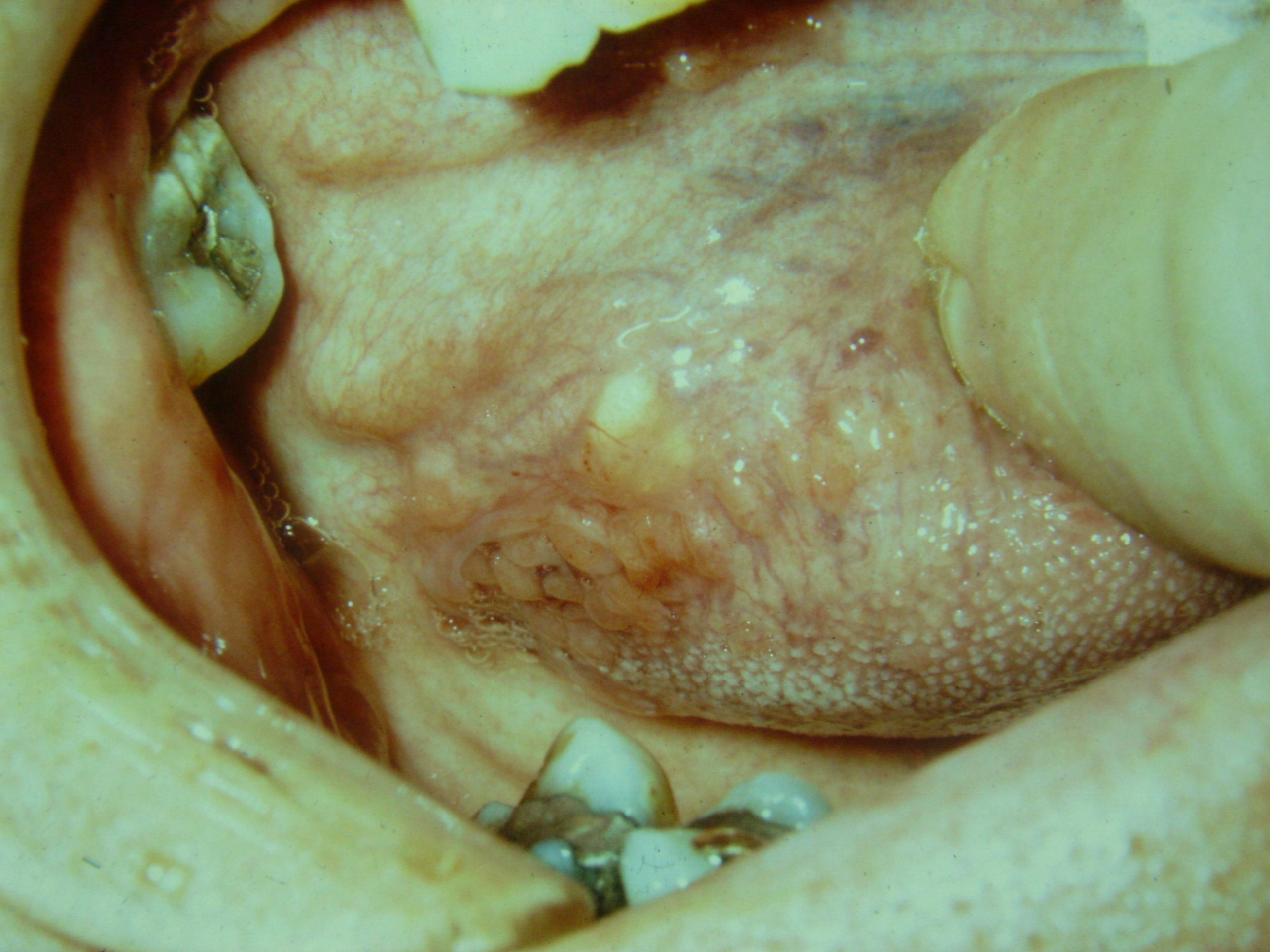
Lymphoid tissue is normally found in the oral cavity and pharynx, principally consisting of **Waldeyer's ring**, which includes the palatine tonsils, lingual tonsils, and pharyngeal adenoids. In addition, accessory oral tonsils or lymphoid aggregates may occur in the floor of the mouth, ventral surface of the tongue, and soft palate.

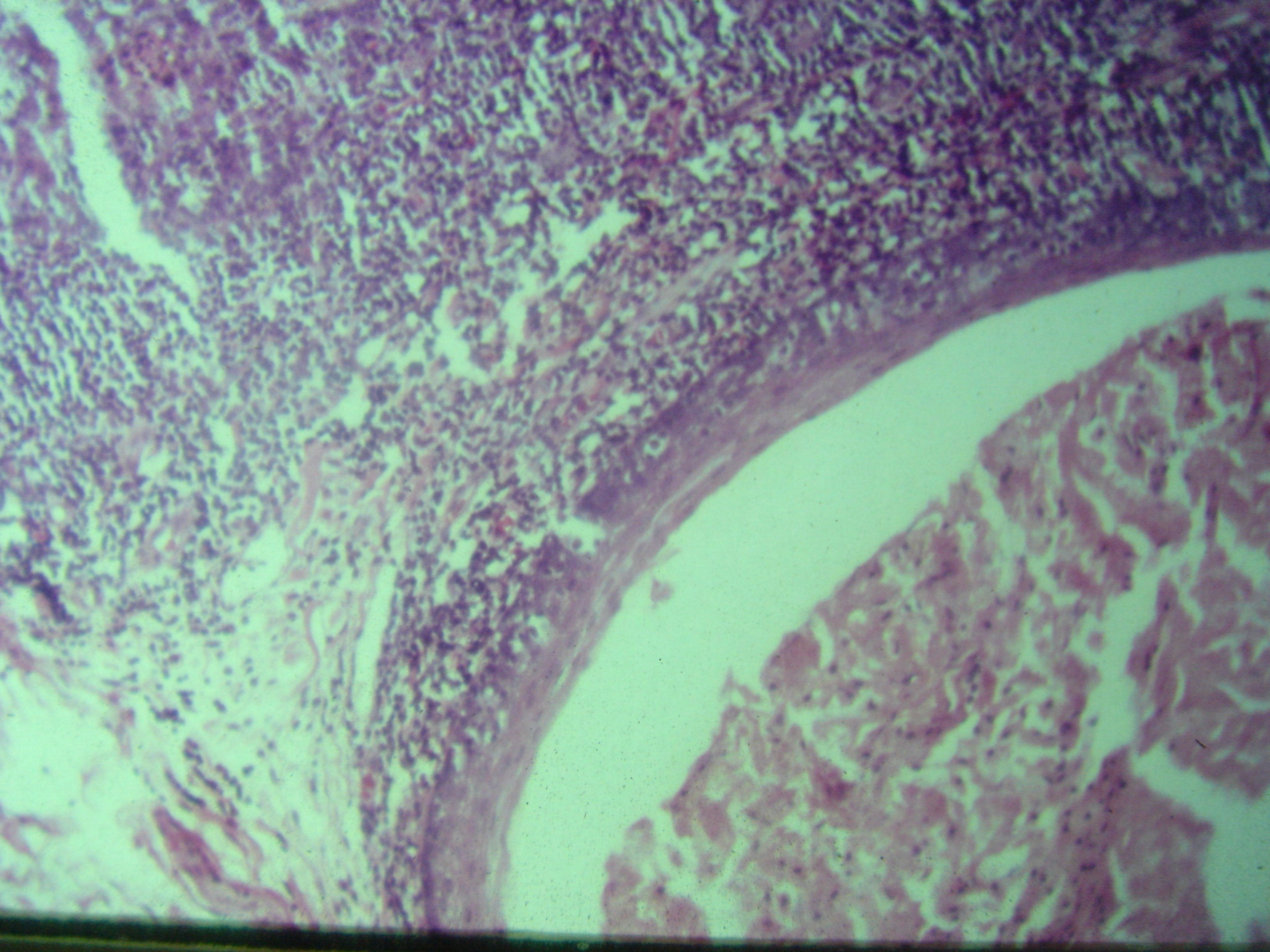
Oral lymphoid tissue has a close relationship with the overlying mucosal epithelium. This epithelium demonstrates invaginations into the tonsillar tissue, resulting in









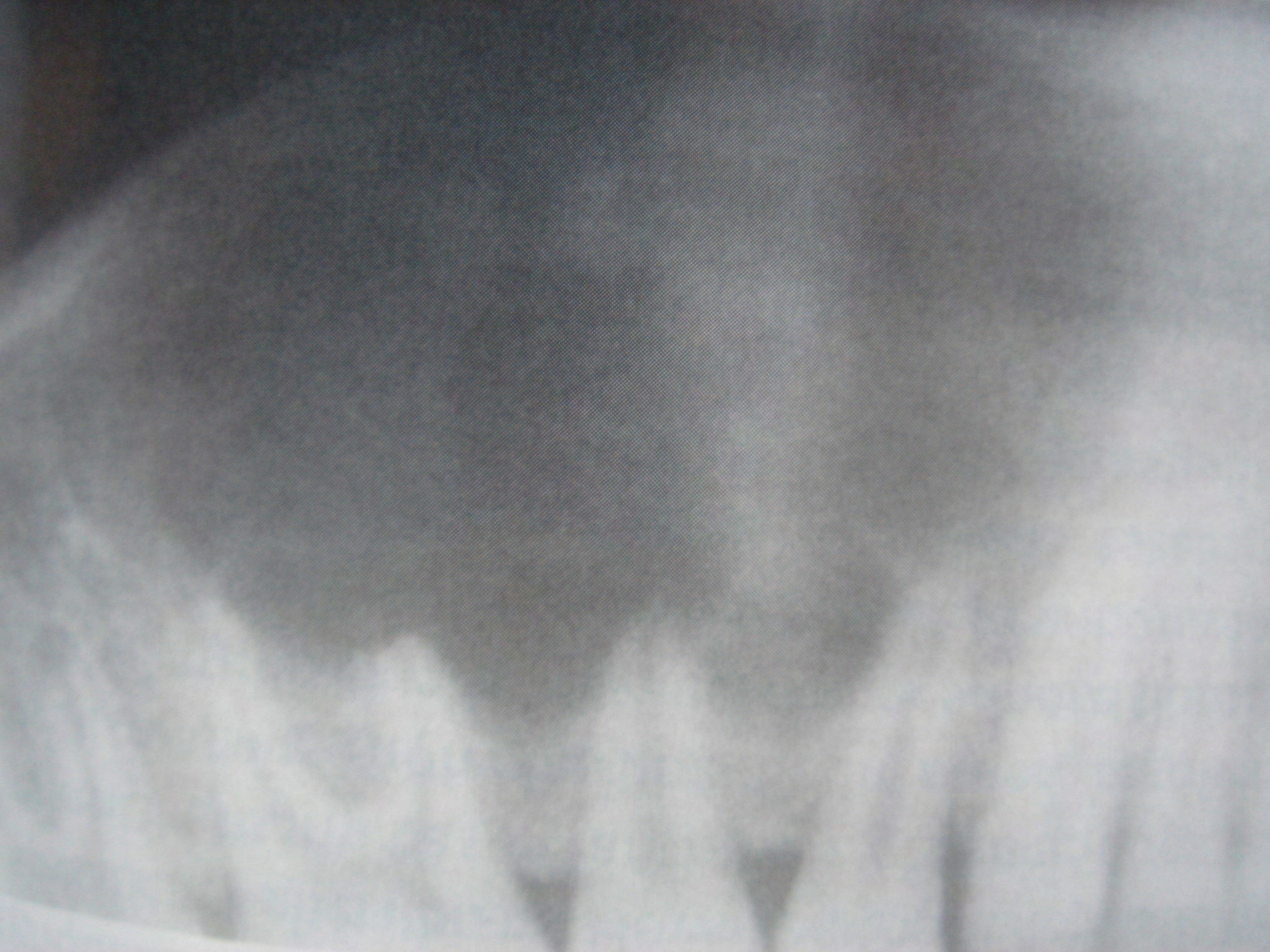


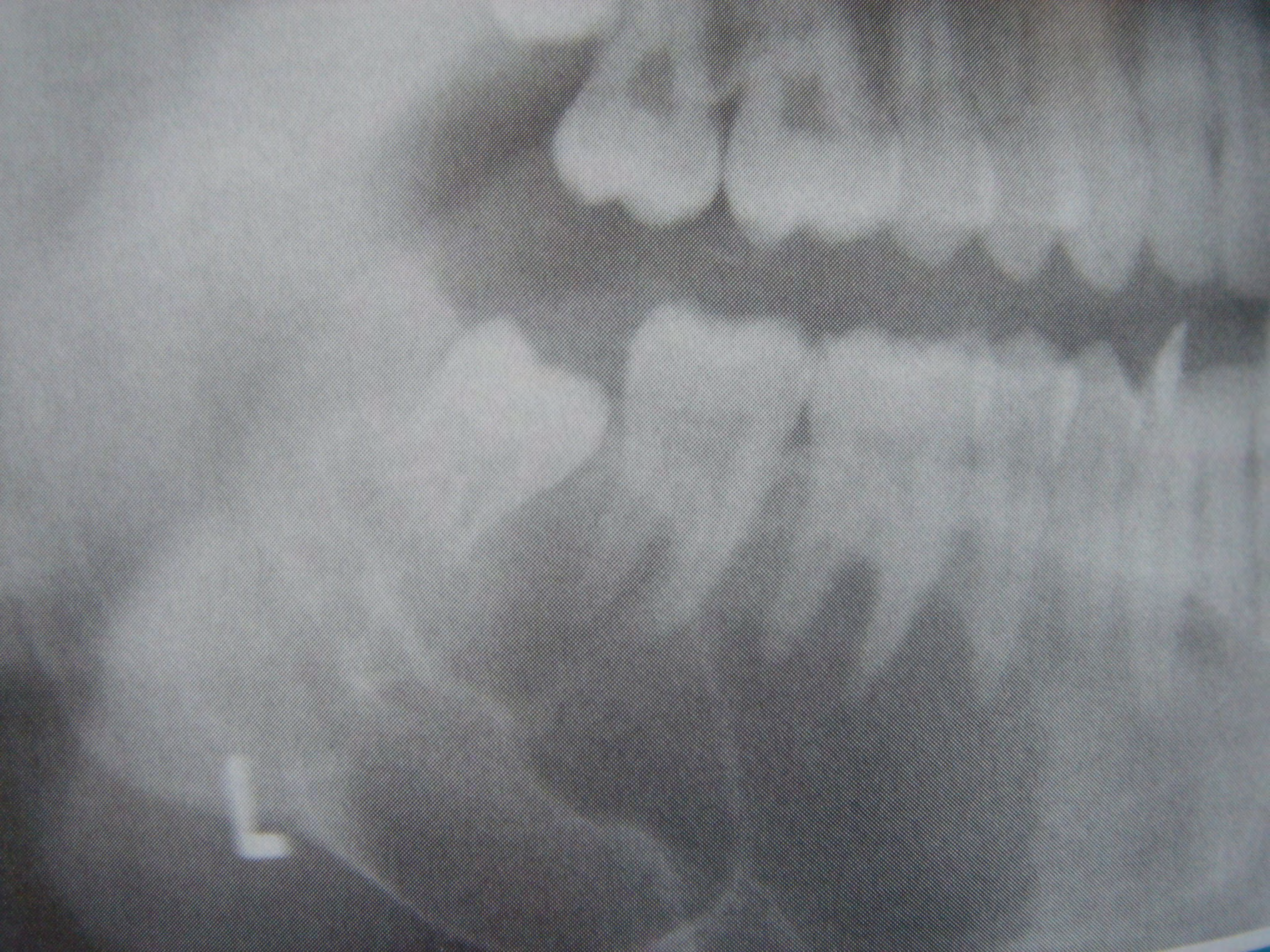
SIMPLE BONE CYST (TRAUMATIC BONE CYST; HEMORRHAGIC BONE CYST; SOLITARY BONE CYST; IDIOPATHIC BONE CAVITY)

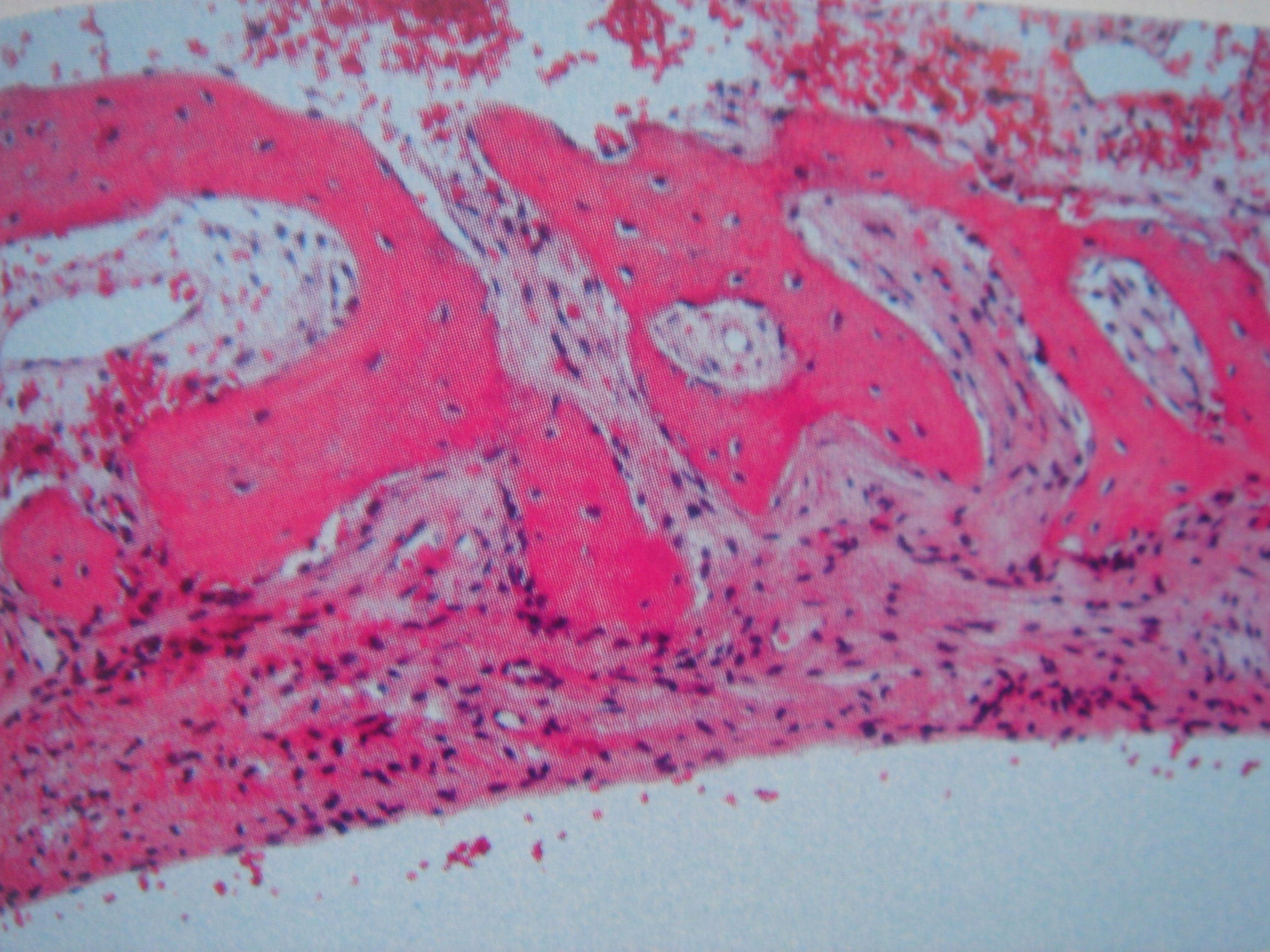
The **simple bone cyst** is a benign, empty, or fluid-containing cavity within bone that is devoid of an epithelial lining. The lesion is undoubtedly more common in the jaws than the literature would indicate. The cause and pathogenesis are uncertain and controversial. Several theories have been proposed, but none of them explains all of the clinical and pathologic features of this disease.

The **trauma-hemorrhage theory** has many advocates, as evidenced by the widely used designation **traumatic bone cyst.** This theory suggests that trauma to the





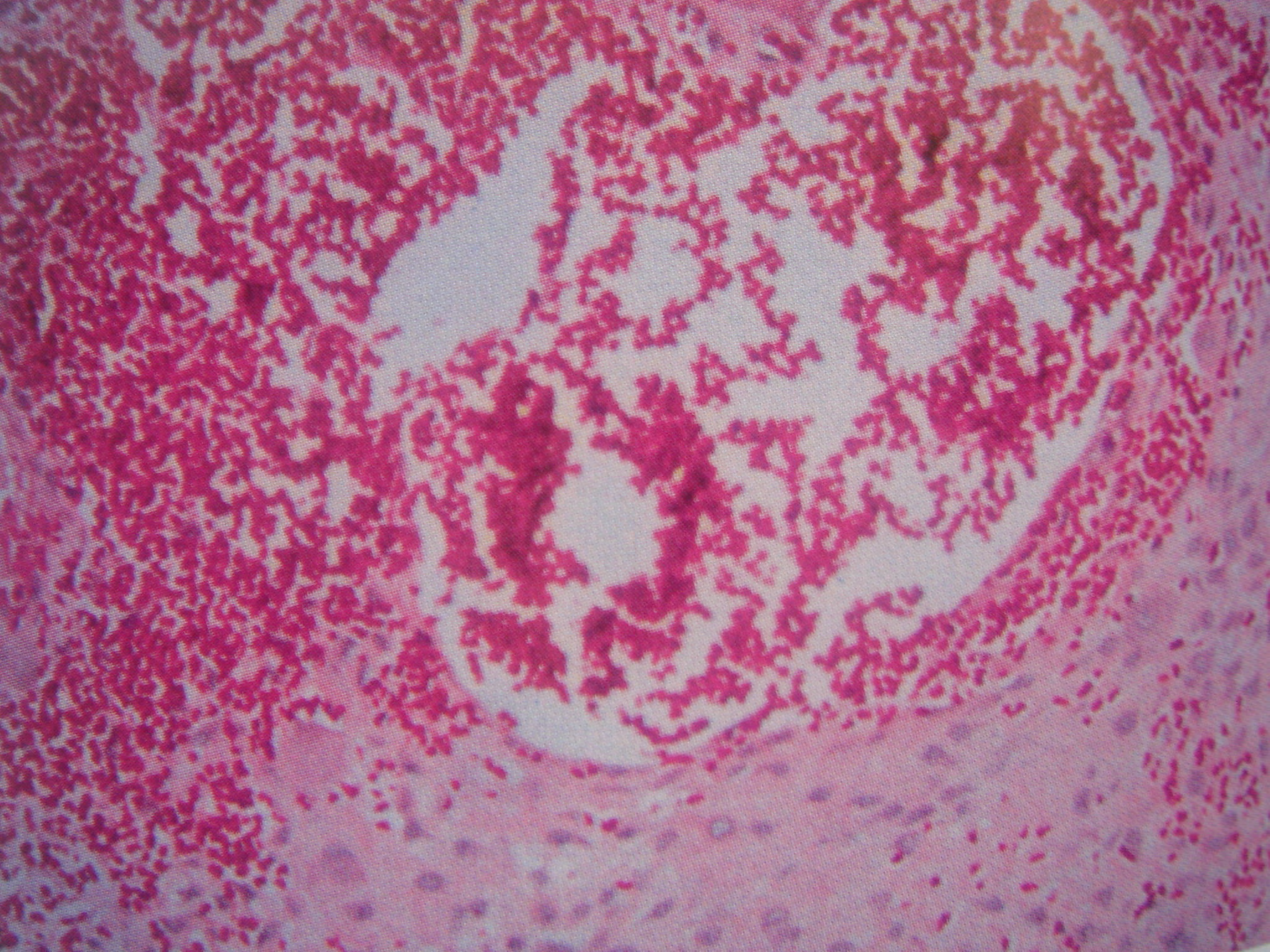




ANEURYSMAL BONE CYST

Aneurysmal bone cyst is an intraosseous accumulation of variable-sized, blood-filled spaces surrounded by cellular fibrous connective tissue that often is admixed with trabeculae of reactive woven bone. The cause and pathogenesis of the aneurysmal bone cyst are poorly understood. Several investigators have proposed that aneurysmal bone cyst arises from a traumatic event, vascular malformation, or neoplasm that disrupts the normal osseous hemodynamics and leads to an enlarging, hemorrhagic extravasation. As a corollary of this theory, others have suggested that aneurysmal bone cyst and giant cell granuloma are closely related. An aneurysmal bone cyst may form when an area of hemorrhage main-





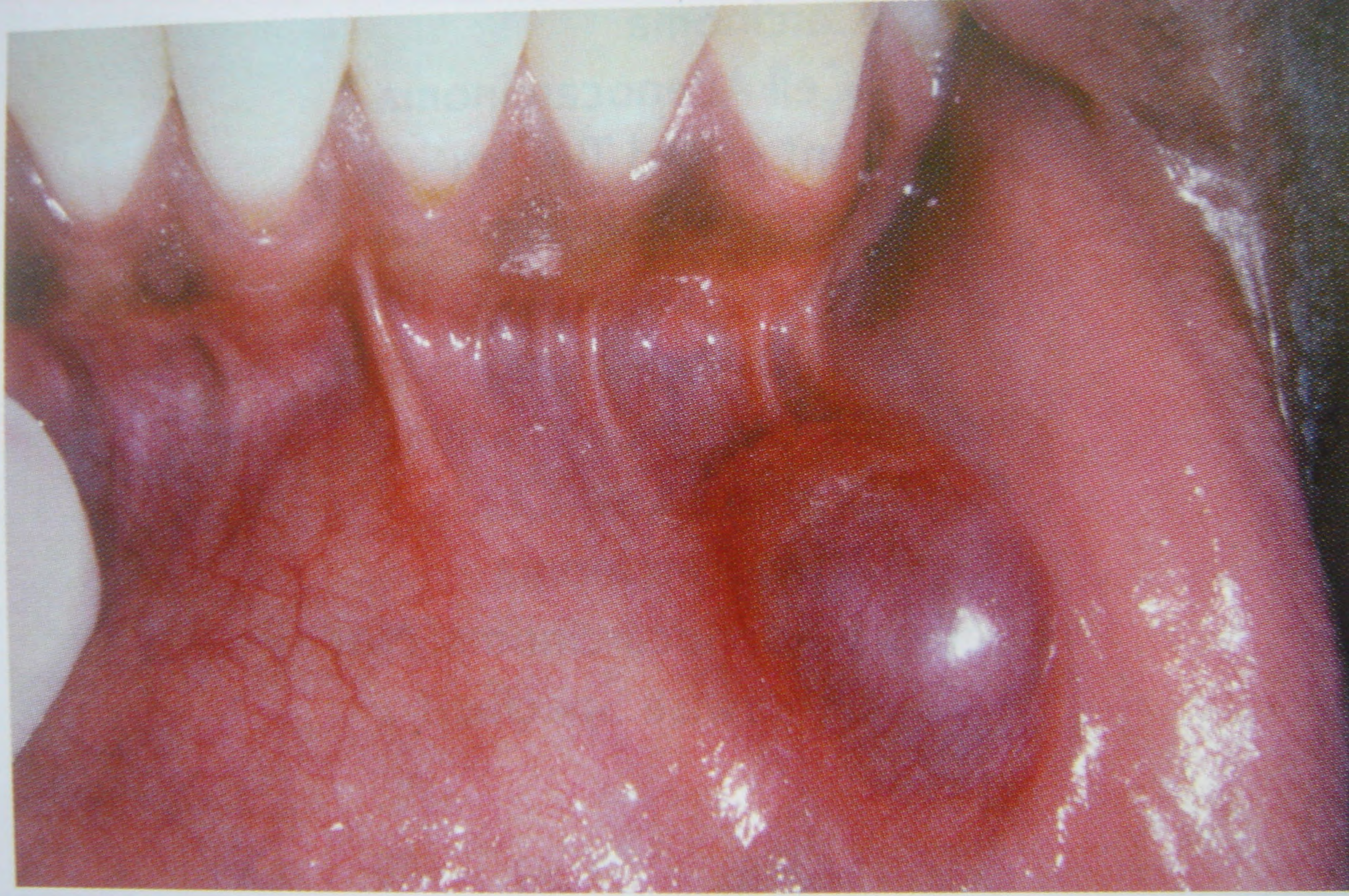
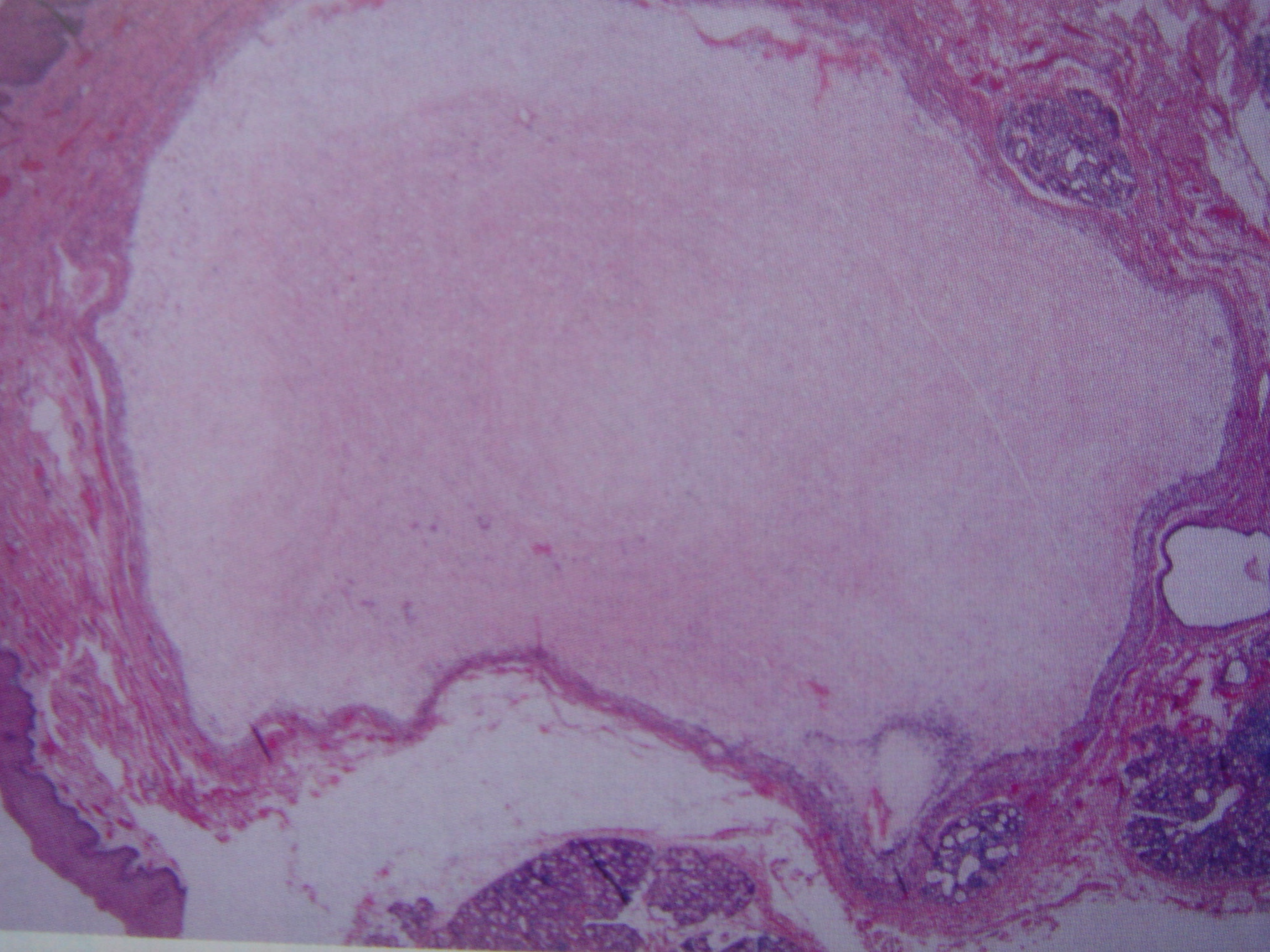


Figure 11-1 ◆ **Mucocele.** Blue-pigmented nodule on the lower lip.



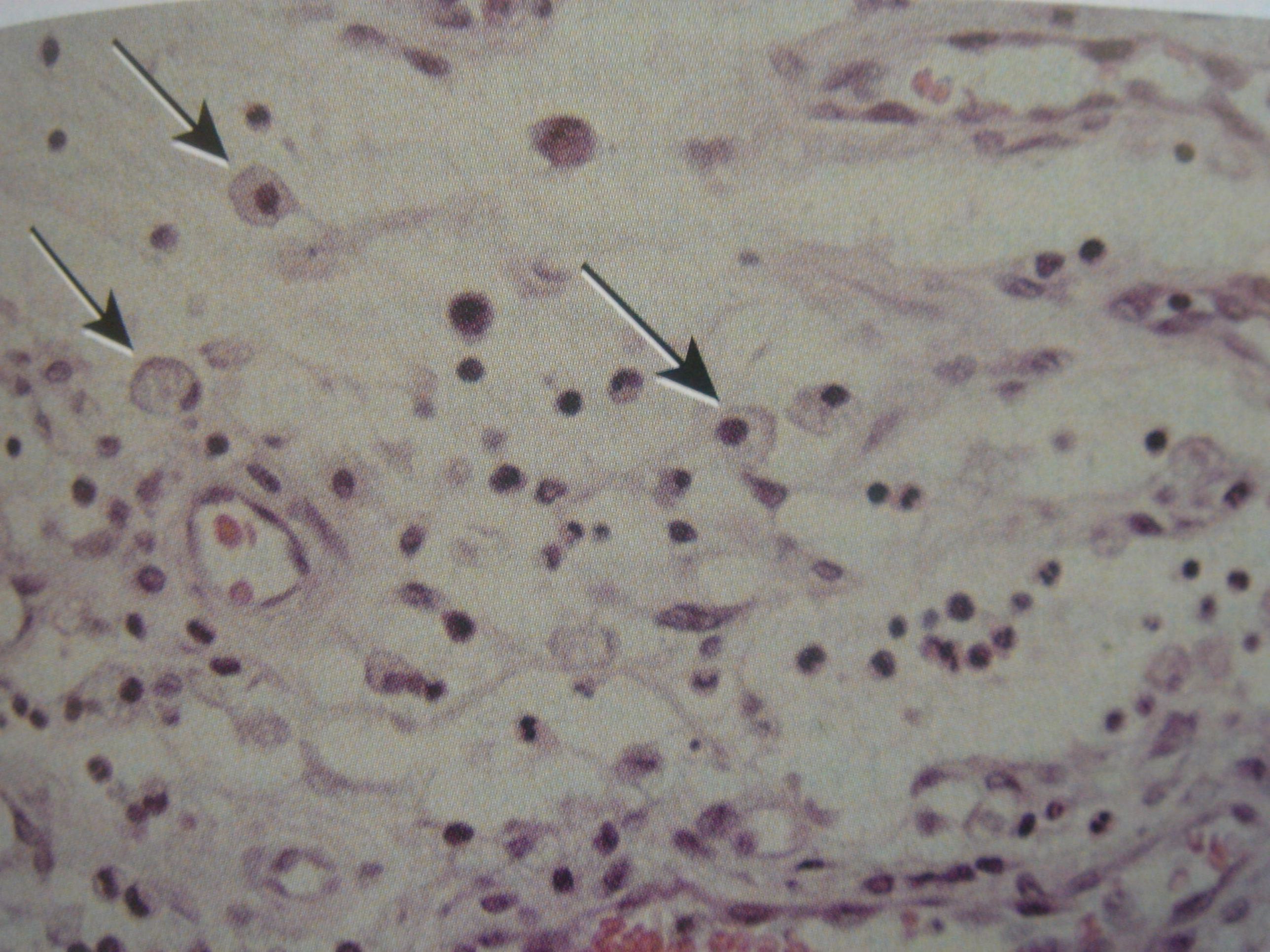






Figure 11-8 ◆ **Plunging ranula.** Soft swelling in the neck

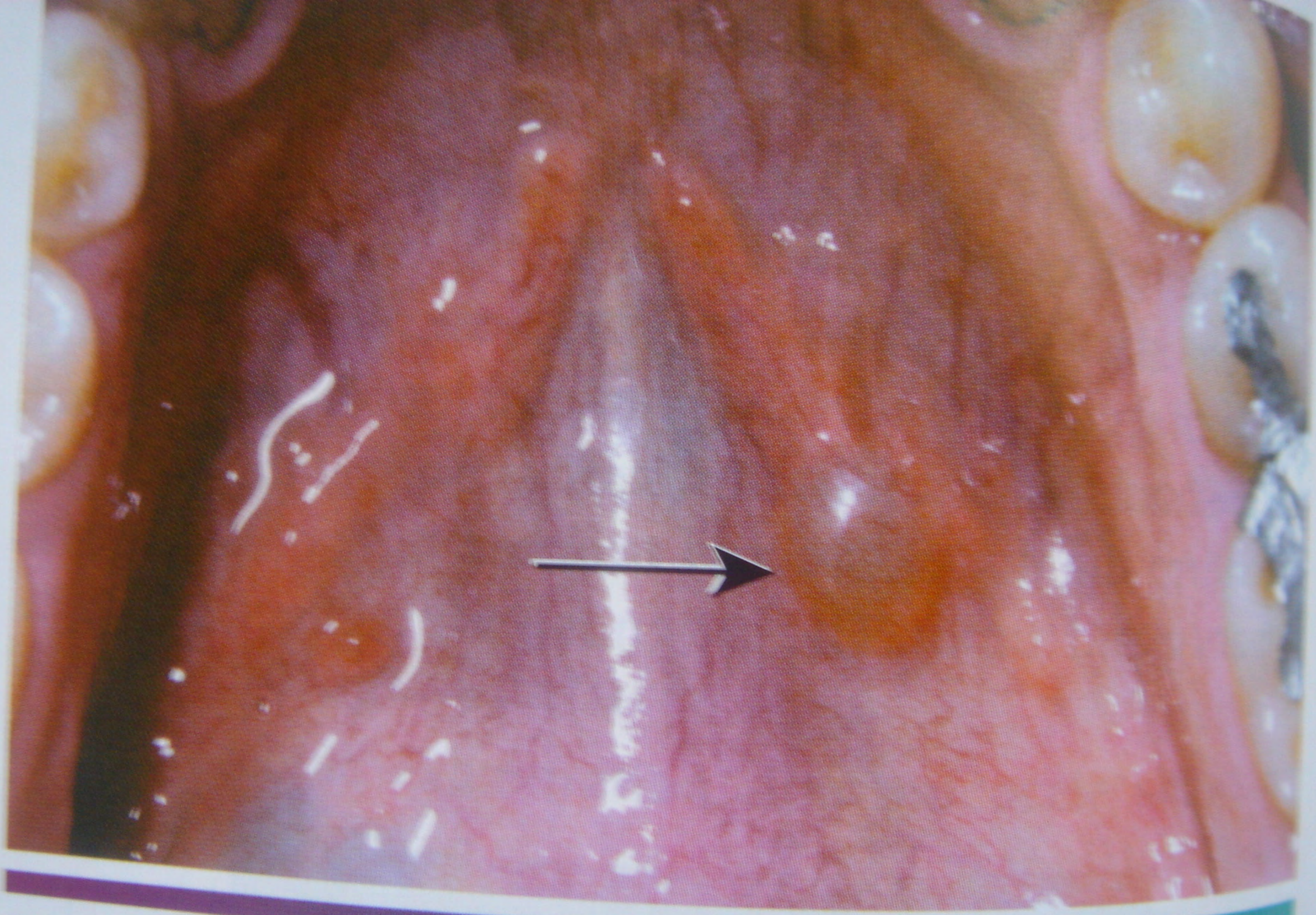


Figure 11-9 • Salivary duct cyst. Nodular swelling *(arrow)* overlying Wharton's duct.

