

ELLIS FISCHER STATE CANCER HOSPITAL

AND

CANCER RESEARCH CENTER

ORAL PATHOLOGY SEMINAR #54

O.P.S.76-1717

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CASE #1. (76-136) (Contributed by Richard K. Wesley, D.D.S., M.S.D.,  
Department of Pathology, University of Detroit,  
Michigan)

This is a specimen from a fifty-five year old female who had been treated by a physician for one year with Demerol for a painful lesion of the maxilla. Upon referral to an oral surgeon in Detroit, a Panorex revealed an ill-defined lesion occupying the entire maxillary sinus with root resorption of several maxillary teeth. The patient presented with facial asymmetry, pain and edema. The oral surgeon removed a solid mass which he stated extended to the floor of the orbit and his clinical impression was maxillary ameloblastoma.

CASE #2. (S-8047-75) (Contributed by Ben Turner, M.D., Department of  
Anatomic Pathology, Dwight David Eisenhower Army  
Medical Center, Ft. Gordon, Georgia)

This fourteen year old female, seen by her physician in April 1975, presented with a 2 cm tender lymph node in the left posterior cervical areas. The clinical impression was nonspecific lymphadenitis. Patient returned on recall and the node had greatly increased in size. There was no history of fever, malaise, chills or weight loss.

COMMENT: Rule out primary tumor in breast or colon. Patient was sent to a Medical Center and at this time we have no further information.

CASE #3. (S-22-76) (Contributed by Doctor Zaloudek, Department of Anatomic  
Pathology, Dwight David Eisenhower Army Medical Center,  
Ft. Gordon, Georgia)

Twenty-one year old black male with a firm neck mass first noticed four months ago which measures 2 x 2 cm. When seen by EENT (Dr. Dean Briggs), the mass was thought to be a benign tumor located in either the submaxillary gland or in the parotid tail.

COMMENT: There were crystalline formations noted throughout the lesional tissue which was thought to be tyrosine or oxalate crystals. A.F.I.P. stated that the "Danielli procedure" was strongly positive for tyrosine.

CASE #4. (S-5 29-75) (Contributed by Doctor Joseph T. Fay, Department of  
Anatomic Pathology, Dwight David Eisenhower Army  
Medical Center, Ft. Gordon, Georgia)

Twenty-seven year old caucasian male who presented to the dentist for evaluation of left mandibular swelling. The panorex radiograph revealed a large multicystic radiolucency extending from the second molar area to the coronoid notch. (see x-rays, 35 mm slide)



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October 22, 1976

- CASE #5. (5685-76) (Contributed by William H. Halliwell, D.V.M., Ph.D., Lovelace Foundation for Medical Education & Research, Albuquerque, New Mexico)

A six month old German Shepard dog was present with an enlargement of the left body of the mandible, that measured 4 x 7 x 4 cm. The owner stated that he noticed the enlargement approximately three weeks prior to presentation. Tissue is from a biopsy of the body of the mandible. (clinical photos & x-rays are included)

- CASE #6. (58-1263) (Contributed by Carlos Perez-Mesa, M.D., Department of Pathology, Ellis Fischel State Cancer Hospital, Columbia, Missouri)

This is a 15 year old Caucasian male who was admitted to Ellis Fischel State Cancer Hospital because of a lump in the left parotid gland; four months in duration. The mass measures 6 x 6 x 4 cm. It was smooth and extended to the tragus of the left ear and was fixed to the skin and deep tissues. It was painless and no involvement of the 7th nerve was noted. There was also a few enlarged lymph nodes in the left side of the neck. The laboratory studies were within normal limits. Roentgenograms of the region shows a soft tissue density overlying the left zygoma and zygomatic arch with demonstrable bone destruction.

- CASE #7. (75-2402) (Contributed by R.M. Ramirez, M.D., Pathologist, Doctors Hospital, Inc., Poplar Bluff, Mo.)

This 16 year old male developed within the parotid gland, in the left side, a nontender mass. Slow growth was noticed, and the lesion was movable in a vertical direction. During surgical excision, grossly there was a capsule. This was a single unilateral mass. The other salivary glands showed no obvious pathology. There were no changes in the lacrimal glands. No other systemic manifestations were evident.

- CASE #8. (76-1688) (Contributed by Carlos Perez-Mesa, M.D., Pathologist Ellis Fischel State Cancer Hospital, Columbia, Mo.)

This is a 52 year old Caucasian female who had a lesion on the back of the mouth which was noted by the patient four months prior to admission. A biopsy was done elsewhere and was diagnosed as verrucose carcinoma. The lesion was located in the soft palate and measures 4 x 3 cm; occupying the entire soft palate and right half of hard palate posteriorly, extending into the right zygomatic fossa. No boney involvement was demonstrated on roentgenograms. The rest of the physical examination as well as the laboratory studies were non-contributory. The lesion was excised.





UNIVERSITY OF MINNESOTA  
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October 1, 1976

Dr. Carlos Perez Mesa  
Department of Pathology  
Ellis Fischel State Cancer Hospital  
Columbia, MO 65201

Dear Carlos:

I am very happy to see that you are back in action. Here is my impression on the cases for the Oral Pathology Seminar.

Case #1 - Adenoid cystic carcinoma of minor salivary gland. It has a rather solid and undifferentiated appearance, probably indicative of an aggressive behavior.

Case #2 - Metastatic carcinoma. I would suggest thyroid (?? medullary carcinoma) and salivary glands as possible sites for the primary tumor. *lymph node*

Case #3 - Pleomorphic adenoma (benign mixed tumor) with tyrosine crystals. This curious occurrence was well described by Nochomovitz and Kahn (Arch. Pathol., 97:141, 1974).

Case #4 - Dentigerous or radicular cyst with inflammation, ulceration and epithelial hyperplasia. I cannot make an ameloblastoma out of this.

Case #5 - It looks like a big tooth to me. I am not sure that the lesion is well represented in my slide.

Case #6 - I have to favor a diagnosis of alveolar rhabdomyosarcoma for this highly malignant tumor in view of the age of the patient and location.

Case #7 - This slide is impossible. I think there is a lymphoid infiltrate in the gland, but I could not even begin to do a cytologic analysis.

Case #8 - Verrucous carcinoma. There must be some trap here!

Un abrazo,

Juan Rosai, M.D.  
Professor of Laboratory Medicine  
and Pathology  
Director of Anatomic Pathology

JR/mfb



"OFFICIAL DIAGNOSIS"

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CASE #1. ADENOID CYSTIC CARCINOMA

(Contributed by Richard K. Wesley, D.D.S., M.S.D.,  
University of Detroit, Michigan)

The prevalent diagnosis was adenoid cystic carcinoma. Areas of varied differentiation between the tumor was noted by various observers. Dr. Shafer from Indiana said, "I think this is, in part at least, an adenoid cystic carcinoma, but I have never seen one undifferentiated like this in some areas. Therefore, I would suggest that this might be a collision tumor between a cylindroma and a primary carcinoma of the sinus." Dr. Berthrong from Colorado Springs stated, "Adenoid cystic carcinoma with very poor differentiation in many areas. I would prefer that diagnosis to saying that there are two cancers." Dr.'s Corio, Crawford and Tarpley from N.I.H. made the following comments, "Adenocarcinoma, not otherwise specified - has features in areas of adenoid cystic carcinoma and others of mucoepidermoid carcinoma." Dr. Abrams from U.S.C. said, "Adenoid cystic carcinoma with dedifferentiation to anaplastic adenocarcinoma. (Maybe someone would call this a "mixed malignant tumor" as opposed to a "malignant mixed tumor.)" Dr. Batsakis from Michigan stated, "Biphasic carcinoma: adenoid cystic and epi-myeoepithelial carcinoma of intercalated ducts." Dr. LeGal from Strasbourg, France called it an adenoid cystic carcinoma, primary in accessory gland of sinus? Dr.'s Ackerman and Sciubba from Stony Brook called it, "adenocarcinoma."

This case was discussed by Dr. Dunlap from Kansas City, Missouri.

CASE #2. MALIGNANT TUMOR, METASTATIC

(Contributed by Ben Turner, M.D., Dwight David Eisenhower  
Army Medical Center, Georgia)

The overwhelming diagnosis was metastatic tumor. Dr. Hori from Moberly, Missouri suggested a primary in breast. Dr. King from S.I.U. added, the thyroid or parotid as other possible sites for the primary tumor. Dr. Batsakis suggested a neuroendocrine origin. Dr. Berthrong commented, "I would consider stomach before colon. Carcinomas of the stomach have been reported in young people; for example, in 1900 Osler & McCrea collected six cases from the first decade and thirteen cases from the second decade of life. Sullivan in 1924 reported 25 cases occurring prior to the age of 25; 21 of which occurred in the first 20 years of life. Somehow the cells in this biopsy suggest "stomach" to me."

FOLLOW-UP: As submitted by the contributor, "metastatic carcinoma was the diagnostic impression when the patient was seen in the Medical Center at Ft. Gordon, however the patient was taken to another Medical Center and a follow-up has not been able to be obtained. The original biopsy was done by a M.D. down south of Ft. Gordon and only a scanty history was sent with the tissue."

This case was discussed by Dr. Dunlap from Kansas City, Missouri.



CASE #3. BENIGN MIXED TUMOR WITH TYROSINE CRYSTALS

(Contributed by Doctor Zaloudek, Dwight David Eisenhower Army Medical Center, Georgia)

With a few exceptions, most of the observers agreed with this diagnosis. There is a paper that deals with the presence of tyrosine crystals in salivary gland tumors that has been published in the Archives of Pathology by Lucien E. Nochomovitz and Kahn, Volume 97, March 1974. A few observers showed concern about the worrisome appearance of the cytology and two others blamed the abundant deposits of tyrosine crystals and the extensive hyalinization of the tumor on the basis of trauma. This case was discussed by Dr. Rowe from Ann Arbor, Michigan.

CASE #4. ODONTOGENIC KERATOCYST

(Contributed by Joseph T. Fay, M.D., Dwight David Eisenhower Army Medical Center, Georgia)

Dr. Wesley from Detroit, as well as most of the observers called it odontogenic keratocyst. Dr. Batsakis from Michigan called it a "dentigerous cyst (not an ameloblastoma or keratocyst)." Primordial cyst was the diagnosis of Dr. Herbert Taylor from St. Louis, Dr. LeGal from Strasbourg, Dr. Williams from Stanford, Dr. Spjut from Houston, and Dr. Rosai from Minnesota.

This case was discussed by Dr. Rowe from Ann Arbor, Michigan and a lively, but friendly discussion ensued concerning classification and semantics for the edification of the audience.

CASE #5. ODONTOMA

(Contributed by William H. Halliwell, D.V.M., Ph.D., Lovelace Foundation for Medical Education & Research, Albuquerque, New Mexico)

There was some difficulty with the preparation of the slides and probably in some slides there was not a good representation of the lesion. A few dissenting views were expressed including "fibrous dysplasia, neurofibroma and segment of bone and tooth. For better understanding of the roentgenographic findings, by courtesy of Dr. Halliwell, a copy of the anatomy of the mandible of the dog is included.

CASE #6. MALIGNANT TUMOR

(Contributed by Dr. Perez-Mesa, Ellis Fischel State Cancer Hospital, Columbia, Missouri)

All of the participants agreed that this represents a malignant tumor. This was expressed by many different diagnoses such as "malignant round cell tumor, small cell malignant neoplasm and undifferentiated small cell malignancy." Other more specific diagnoses included "primitive mesenchymal tumor, alveolar and embryonal rhabdomyosarcoma, and Ewing's sarcoma. In addition, other diagnoses considered the possibility of this being a malignant lymphoma.

FOLLOW-UP: This patient is still alive and is presently serving a sentence in the State Penitentiary of Missouri; at the time of his admission, at Ellis Fischel State Cancer Hospital, there were also a few enlarged lymph



nodes in the left side of the neck which were not biopsied. However, these were included in the field of irradiation. The patient received a total of 2,000 rads.

The dramatic and permanent response to radiotherapy indicates that this was a very radio-sensitive tumor. A malignant lymphoma probably would be the most likely possibility. Among the observers who considered the possibility of lymphoma includes Dr. Fay from Georgia, Dr. Herb Taylor from St. Louis, Dr. Halliwell from New Mexico, Dr. Waterhouse and Dr. Das from Chicago.

In the opinion of various radiotherapist, the amount of irradiation given to the patient was inadequate for the treatment of a rhabdomyosarcoma.

CASE #7. TOXOPLASMOSIS

(Contributed by R.M. Ramirez, M.D., Doctors Hospital,  
Poplar Bluff, Missouri)

Some observers received inadequate slides. However, the diagnosis of toxoplasmosis was made by Dr. LeGal, Dr. Pullon and Associates from the Washington University of St. Louis, and Dr. Taylor and others among the group of consultants. Dr. Shafer from Indiana stated, "toxoplasmic lymphadenitis, a magnificent case."

FOLLOW-UP: The patient is presently asymptomatic.

CASE #8. VERRUCOUS CARCINOMA

(Contributed by Dr. Perez-Mesa, M.D., Ellis Fischel  
State Cancer Hospital, Columbia, Missouri)

This case was presented in the seminar in order to discuss the surgical approach and rehabilitation which was done by Dr. Johnston and Dr. Guerra at the Ellis Fischel State Cancer Hospital. With exception of one solitary dissenting consultant, whose name will remain anonymous, the diagnosis was verrucous carcinoma.



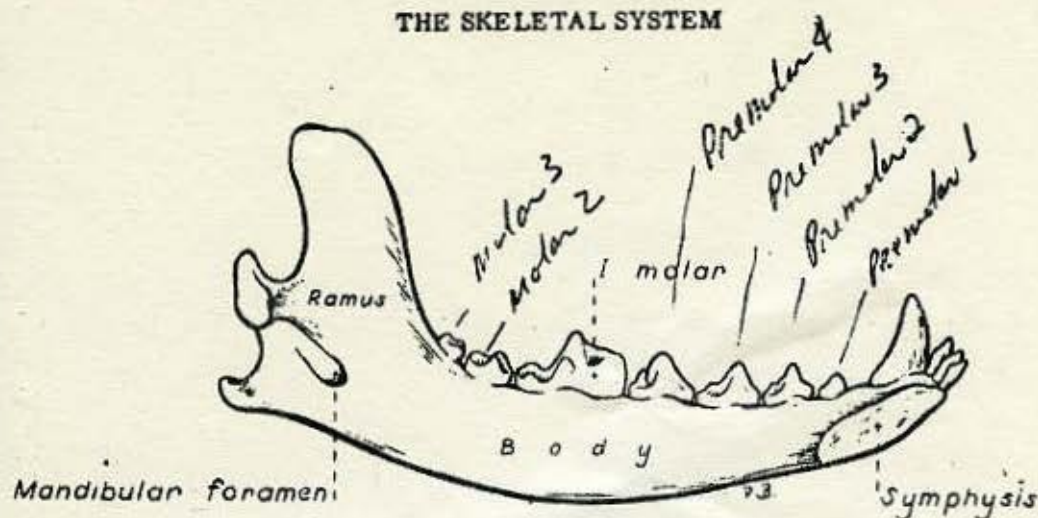


Fig. 18. Mandible, medial aspect.

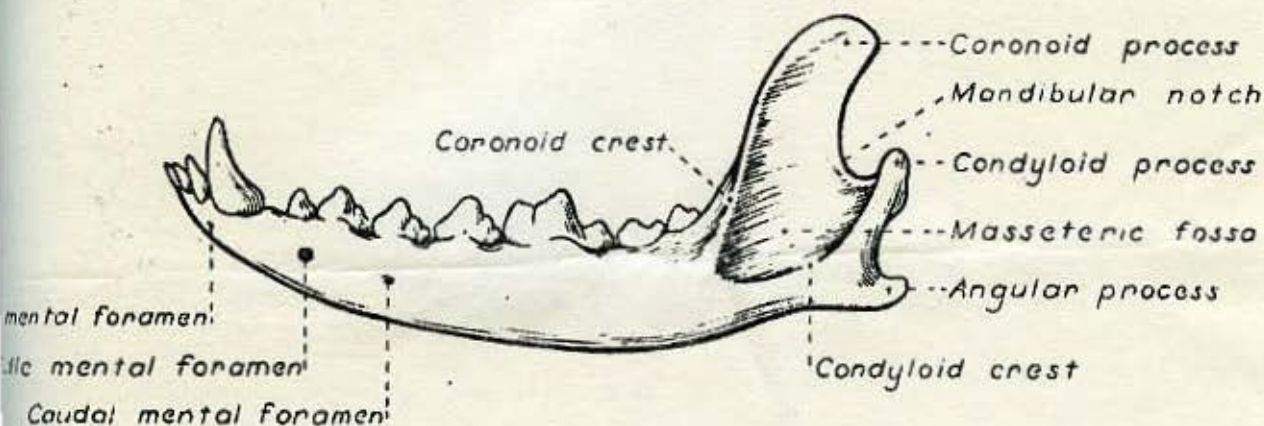


Fig. 19. Mandible, lateral aspect.

This nerve can also be accomplished by injecting anesthesia from inside the mouth caudomedial to the last molar tooth (Lacroix). The nerve can be palpated from both outside and inside the mouth.

The mandibular canal contains the mandibular vessels and nerve which supply the lower teeth. The canal runs forward and downward from the mandibular foramen through the ramus and is continued in the ventral part of the body. It is located a short distance from the roots of the teeth. Small alveolar canals carry nerve twigs and vessels from the parent structures in the mandibular canal to the roots of the cheek tooth. About 5 mm. caudal to the middle mental foramen the incisivomandibular canal branches off the ventral part of the mandibular canal. It carries nerve fibers and vessels to the incisor teeth. These reach each tooth by a separate alveolar canal.

#### D. Hyoid bones

The hyoid apparatus (fig. 16) is composed of the hyoid bones and their connecting cartilages. These stabilize the tongue and the larynx; they are located principally between the rami of the mandible. The bones are paired except the basihyoid, which unites the elements of the two sides in the root of the tongue.

The tympanohyoid (fig. 16), a segment of a cartilaginous rod which articulates with the temporal bone, extends anteroventrad from this articulation. Distally it articulates with the first fully developed hyoid bone, the stylohyoid.