ELLIS FISCHEL STATE CANCER HOSPITAL

AND

CANCER RESEARCH CENTER

ORAL PATHOLOGY SEMINAR #51

May 30, 1975

CASE #1. (S85192, S85418, S73-4786, S75-1899) (Contributed by Ronald W. Oxenhandler, M.D., Department of Pathology, University of Missouri Medical Center, Columbia, Missouri)
A fifteen year old white female who noticed a slow, non-painful enlargement of the right eminence and right side of the maxilla over a 14 month period from January 1970 to March of 1971. This began following trauma to this region in an auto accident.

On March 24, 1971, the patient had a right partial maxillectomy performed. (See slides 1A and 1B)
Despite the right partial maxillectomy in 1971, the patient noticed progressive enlargement of the right side of her face. In 1973, and 1975, she underwent a revision of the right partial maxillectomy. (See representative slides 1C and 1D)

Physical Examination: Prominent right malar eminence with loss of the right nasolabial fold. The nose was deviated to the left and the hard palate was intact. The rest of the physical examination was normal.

CASE #2. (S75-988) (Contributed by John S. Meyer, M.D., Department of Pathology, Jewish Hospital, St. Louis, Missouri)
A 51 year old white female has had chronic renal disease for 12 years. Three years ago a radical mastectomy was performed for carcinoma. On 3, January, 1975, she noted soreness in the oral cavity, and radiographs showed a radiolucent lesion in the mandible (see 35 mm slides) as well as sclerotic change in the 3rd lumbar vertebra and to a lesser extent in the bodies of T12 and L1, and osteolytic foci in the 7th and 8th ribs and left humeral head. These were interpreted by the radiologist as metastatic carcinoma. A bone scan showed increased radioisotopic uptake over these foci, but over foci of mottling in the pelvis. The patient had a moderate normochromic, normocytic anemia, but white blood cells and platelets were unremarkable. Fasting glucose was 86 mg/dl, urea nitrogen 85, creatinine 3.6, uric acid 7.6, calcium 13.0, phosphorus 4.4, alkaline phosphatase 370 IU with only 9% remaining after heating, LDH 170 IU, GOT 15 U, Total protein 8.0, albumin 4.1 g/dl, bilirubin 0.4 mg/dl. On February 5th, an incision was made from the mesial of the first lower right molar to the distal of the canine, cortical bone was removed, and the cyst was curetted. A slide of the material from the cyst is included. A second operation was done on 17, February.

CASE #3. (D2201-AU) (Contributed by Nathaniel Rowe, D.D.S., M.S.D., University of Michigan, School of Dentistry, Ann Arbor, Michigan)
Lesion in upper lip. Feels firm.

CASE #4. (5962-74) (Contributed by William Halliwell, D.V.M., Pathologist, University of Missouri Veterinary School, Department of Pathology, Columbia, Missouri)

ELLIS FISCHEL STATE CANCER HOSPITAL

AND

CANCER RESEARCH CENTER

ORAL PATHOLOGY SEMINAR #51

May 30, 1975
O.P.S. 75-919

A six year old male Red Bone Hound was presented with multiple nodular cutaneous tumors. In the oral cavity, there were a dozen 1-2 mm tumors in the tongue and soft pink-tan tumor that surrounded the right and left molars. The tissue submitted is from tissue medial to the right first molar.

CASE #5. (75-Kudu) (Contributed by William Boever, D.V.M., and W. H. Halliwell, D.V.M., St. Louis Zoo, University of Missouri Veterinary School, Department of Pathology)

A five year old Greater Kudu (antelope family) developed a swelling located at the symphysis of the mandible. This gradually became larger until the incisor teeth were widely separated. After approximately 3 months the distal portion of the mandible was amputated immediately anterior to the premolars. The mass was hard to the touch, but could be cut with a knife. (see representative clinical photo and roentgenogram)

CASE #6. (50-1352) (Contributed by Carlos Perez-Mesa, M.D., Chief Pathologist, Ellis Fischel State Cancer Hospital, Columbia, Missouri)

20 year old Caucasian female was admitted to Ellis Fischel State Cancer Hospital because of a growth in the right mandible. She noticed this enlargement of her mandible for the last 7 years, sometimes associated with sharp pains requiring no sedation, however. No loss of weight or other symptoms were noted. A roentgenogram showed a sharply defined tumor with irregular calcifications attached to the cortical aspect, inferior outer portion of right mandibular body. The lesion was excised.

CASE #7. (75-635) (Contributed by Charles L. Dunlap, D.D.S., and Bruce Barker, D.D.S., Department of Pathology, University of Missouri-Kansas City, School of Dentistry, Kansas City, Missouri)

This is a lesion removed from the lingual gingiva adjacent to the maxillary central incisors on a 26 year old female. The lesion was discovered by the patient three years previous to excision. It had recently increased in size. There are no symptoms associated with the lesion. It was stated to be pedunculated and had a cauliflower appearance. The gross specimen measured 0.7 cm, in greatest dimension. Clinical impression was fibroma versus papilloma.

CASE #8. (75-347) (Contributed by Charles L. Dunlap, D.D.S., and Bruce Barker, D.D.S., Department of Pathology, University of Missouri-Kansas City, School of Dentistry, Kansas City, Missouri)

A 74 year old white female was seen by an oral surgeon because of a palatal

mass. The growth was said to have been noticed approximately two weeks before biopsy was performed. It was located in the mucosa of the hard palate and x-rays and surgery showed no extension into underlying bone. The surgeon stated that this is an incisional biopsy, that all of the lesion could not be obtained because it tended to infiltrate posteriorly into the soft palate.

CASE #9. (75-2993) (Contributed by Charles L. Dunlap, D.D.S., and Bruce Barker, D.D.S., Department of Oral Pathology, University of Missouri-Kansas City, School of Dentistry, Kansas City, Missouri)

The case is that of a 60 year old white female who was seen in January of 1975 with what appeared to be facial cellulitis on the left side of her chin. There was an obvious enlargement tender to palpation. She wore ill-fitting dentures. Intraoral examinations showed a large epulis fissuratum with what appeared to be an infected ulcer at the base. The patient was treated for one week with antibiotics and hot packs but did not improve.

She was admitted to the hospital and the infected epulis was excised. Incision and drainage produced no purulent material. Instead, a large area of tumor tissue was encountered which was described as being yellowish and rubbery. It was clinically felt to be an inflammatory process but the possibility of neoplasm could not be excluded. A frozen section returned a diagnosis of chronic inflammatory disease.

Postoperatively the patient did not improve. She was seen at weekly intervals and continued to have a severe erythematous reaction in the facial skin which appeared to slowly enlarge. It remained relatively nontender to palpation.

Chest x-rays and hematology were within normal limits. By February 24th, the patient was not improving and at this time there was a 4 x 5 cm palpable mass on the inferior border of the mandible. X-rays show no apparent jaw pathology. She was readmitted to the hospital for re-excision. On March 4, 1975 through a submental incision a large area of yellowish firm rubbery tissue was encountered. Cultering showed no pathogens and the pathology report stated there was chronic granulomatous reaction.

The slides submitted for this seminar were taken from the March 4th, 1975 surgery.

UNIVERSITY OF MINNESOTA
TWIN CITIES

Department of Laboratory Medicine and Pathology
Medical School
Box 609 Mayo Memorial Building
Minneapolis, Minnesota 55455

May 21, 1975

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

233

Dear Carlos:

These are my diagnoses for the Oral Pathology Seminar #51.

1. Fibrous dysplasia. The lesion shows microscopic evidence of progressive maturation.
2. Hyperparathyroidism (osteitis fibrosa cystica)
3. Chronic inflammation with squamous metaplasia of minor salivary gland ducts.
4. Undifferentiated malignant tumor. I cannot decide whether it is lymphoma, carcinoma or melanoma.
5. Myositis ossificans
6. I would put this lesion in the osteoid osteoma-osteoblastoma category rather than in the ossifying fibroma group.
7. Fibrous polyp (so-called giant cell fibroma or irritation fibroma)
8. Malignant lymphoma, lymphocytic type.
9. Malignant lymphoma, lymphocytic, with prominent plasmocytic differentiation.

Thank you for sending these sets. We all enjoy them a lot.

Best regards,

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

JR/mfb

"OFFICIAL DIAGNOSIS" 233

ORAL PATHOLOGY SEMINAR #51

May 30, 1975

O.P.S.75-919

CASE #1. FIBROUS DYSPLASIA

(Contributed by Ronald W. Oxenhandler, M.D., University of Missouri Medical Center, Columbia, Missouri)

This was the most widley excepted diagnosis; 23 institutions and individuals agreed with this diagnosis. Dr. Abrams from U.S.C. commented, "I believe this is fibrous dysplasia. It seems to have undergone maturation over the interval represented by the surgical specimens." Dr. Rosai from the University of Minnesota stated, "Fibrous dysplasia. The lesion shows microscopic evidence of progressive maturation." Dr. Shafer from Indiana stated, "A classical example of cranio-facial fibrous dysplasia." Dr. Ramirez from Poplar Bluff called it, osteogenic fibroma. Dr. LeGal from Strasbourg, France and Dr. Kolas called it ossifying fibroma.

CASE #2. HYPERPARATHYROID BONE DISEASE (BROWN TUMOR) OF THE MANDIBLE AND SECONDARY CHIEF CELL PARATHYROID HYPERPLASIA

(Contributed by John S. Meyer, M.D., Jewish Hospital, St. Louis, Missouri)

Dr. Berthrong from Colorado Springs commented, "Consistent with osteitis fibrosa cystica of hyperparathyroidism. I would suspect from a calcium of 13 and a phosphorus of 4.4 that this patient with chronic renal insufficiency for many years has developed so-called terciary hyperparathyroidism and has multiple adenomas in her four enlarged parathyroids. I do not see any evidence of carcinoma in the sections present." Dr.'s Fay, Sharbough Sayers, and Johnson from the Eisenhower Medical Center in Georgia offered, "Central giant cell lesion; rule out hyperparathyroidism." Dr. Waterhouse from the University of Illinois Medical Center offered a diagnosis of, "Secondary hyperparathyroidism possibly secondary to malignant tumor." Dr. Herb Taylor fromthe University of St. Louis commented, "Giant cell tumor." Dr. Whitten from the Southern Illinois University called it, "Central giant cell reparative granuloma." Dr. King from the same institution called it, "Central giant cell lesion of hyperparathyroidism." Other diagnoses submitted included; aneurysmal bone cyst.

FOLLOW-UP: The following information was submitted from the contributor Dr. Meyer; "The second operation was a parathyroidectomy. Three large parathyroids showing chief cell hyperplasia were removed and tissue from the thymus disclosed a fourth small bit of parathyroid. Although we were not satisfied that the bulk of the fourth parathyroid had actually been found, the patient's calcium responded well and was 7.7 on February 26th. On learning of the patient's renal disease and hypercalcemia, the radiologist revised his diagnosis to probable hyperparathyroid bone disease and obtained films of the fingers that showed typical resorptive lesions. Our pathologic diagnoses are hyperparathyroid bone disease (brown tumor) of the mandible and secondary chief cell parathyroid hyperplasia."

"OFFICIAL DIAGNOSIS"

ORAL PATHOLOGY SEMINAR #51

May 30, 1975

O.P.S.75-919

CASE #3. EPIDERMOID CARCINOMA PROBABLY ARISING FROM SALIVARY GLAND DUCT

(Contributed by Nathaniel Rowe, D.D.S., M.S.D., University of Michigan, Ann Arbor, Michigan)

The overwhelming majority of the opinions were of a benign condition. Dr. Pullon from Washington University called it, "Ruptured epidermal cyst." Dr. Wesley from Detroit commented, "Inclusion cyst, infected." Dr. LeGal from Strasbourg, France called it, "Retention glandular cyst with epidermoid metaplasia." Dr. Archard and Dr. Martinez stated, "Suggestive of a keratoacanthoma, although the orientation of the sections does not permit a definite diagnosis." Dr.'s Dunlap and Barker from Kansas City suggested, "Consistent with previously irradiated squamous carcinoma." Dr. Shafer from Indiana commented, "Plain old epithelial inclusion cyst."

FOLLOW-UP: This is an epidermoid carcinoma probably arising from a salivary gland duct. This patient was sent to the St. Joseph Hospital, Flint, Michigan to complete the excision of the lesion. Review of their Department of Pathology supported the diagnosis of Dr. Rowe.

CASE #4. MALIGNANT LYMPHOMA (HISTIOCYTIC TYPE)

(Contributed by William Halliwell, D.V.M., University of Missouri Veterinary School, Columbia, Missouri)

The majority of the participants believed that this was a malignant lesion. Dr. Rosai from Minnesota stated, "Undifferentiated malignant tumor. I cannot decide whether it is lymphoma, carcinoma or melanoma." Dr.'s Tarpley, Corio, and Crawford from Bethesda offered, "Transmissible reticulum cell tumor." Dr. Taylor from St. Louis University offered a diagnosis of, "Histiocytic lymphoma vs. mast cell tumor." The comments of Dr. Berthrong from Colorado Springs are as follows: "I suspect that these are multiple mastocytomas. They don't look quite as typical as most and nothaving a special stain, I'm still concerned about its being an epithelial neoplasm instead of mastocytoma. Being multicentric, I think it is my best guess." From S.I.U., Dr. Whitten and Dr. King called it, canine lymphoma. Dr. LeGal from Strasbourg called it, reticulum cell sarcoma. Dr. Taylor from St. Louis University called it, histiocytic lymphoma vs. mast cell tumor.

CASE #5. OSSIFYING FIBROMA

(Contributed by William Boever, D.V.M., and William H. Halliwell, D.V.M., St. Louis University of Missouri Veterinary School)

Most of the participants considered a diagnostic possibility of fibrous dysplasia or ossifying fibroma. Dr. Ackerman from Stony Brook, New York stated, "Probably it is best designated as ossifying fibroma. This lesion is much more common in the Greater Kudu than in the Lesser Kudu. If this patient should unfortunately die during surgery please

send me a few steaks. There is nothing better I like than a steak from a Greater Kudu." Dr. Berthrong from Colorado Springs stated, "Being one of the world's least experienced pathologists with the Greater Kudu, I am delighted to know that they can develop ossifying fibromas." This was also the diagnosis of Dr. Pullon from Washington University. Dr. Taylor from St. Louis University called it, fibrous dysplasia which was also the diagnosis of Dr. Wesley from the University if Detroit. Dr. Shafer from Indiana commented, "This is a really fantastic case. The lesion is iether fibrous dysplasia or ossigying fibroma, depending upon whether the lesion is circumscribed or not (the ossifying fibroma is the circumscribed one). I can't really tell from the x-ray." Dr. Abrams from U.S.C. stated, "I know less about Kudu pathology than about dog diseases, and that's nothing. Fibrous dysplasia, or possibly ossifying fibroma, would be appropriate diagnoses."
FOLLOW-UP: After surgery was performed it was the impression that probably not all the lesion was removed, however the animal had been gaining weight steadily; his present weight is over one thousand pounds which is within normal limits for an animal at his age.

CASE #6. OSTEOBLASTOMA

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

Most of the diagnoses consisted either of benign osteoblastoma or osteoid osteoma. The rest of the opinions received were unable to separate one from the other. Dr. Rosai from Minnesota commented, "I would put this lesion in the osteoid osteoma-osteoblastoma category rather than in the ossifying fibroma group." Dr. Waterhouse from the University of Illinois called it, osteoblastoma. This was also the diagnosis of Dr. Dunlap and Dr. Barker from Kansas City, Missouri. Dr. Abrams from U.S.C. stated, "Osteoid osteoma or osteoblastoma, both representing essentially the same disease."

CASE #7. GIANT CELL FIBROMA (FIBROUS HYPERPLASIA)

(Contributed by Charles Dunlap, D.D.S., and Bruce Barker, D.D.S., University of Missouri-Kansas City, Missouri)

This was the most popular diagnosis, other diagnosis included: irritation fibrosis, fibrous polyp, fibroepithelial papilloma.

REFERENCES

Weathers, D.R., Callihan, M.D., GIANT CELL FIBROMA, 37:374, March 1974.

Regezi, T.A., et. al., FIBROUS LESION OF SKIN AND MUCOUS MEMBRANES WHICH CONTAIN STELLATE AND MULTINUCLEATED CELLS. Oral Surg. 39: 605, April 1975.

"OFFICIAL DIAGNOSIS"

ORAL PATHOLOGY SEMINAR #51

May 30, 1975

O.P.S.75-919

CASE #8. LYMPHO PROLIFERATIVE INFILTRATE

(Contributed by Charles Dunlap, D.D.S., and Bruce Barker, D.D.S., University of Missouri-Kansas City, Missouri)

Most of the participants considered this as a malignant lymphoma. Dr. Ramirez from Poplar Bluff, Dr. Rosai from University of Minnesota, called it, malignant lymphoma lymphocytic type. Diagnosis of Dr. Shafer was, "Well differentiated diffuse palatal lymphocytic lymphoma (See Tomich and Shafer: Oral Surg., Oral Med., Oral Path., 39: 754, May 1975.) This was also the opinion of many of the participants. Dr. Berthrong commented, "I believe that it represents a poorly differentiated nodular lymphoma. I'm not absolutely certain of that diagnosis but would be willing to see the patient treated locally, though not systemically for that condition. I believe I would do bone marrows & perhaps a needle biopsy of the liver to determine possible widespread nature of the disease at this time. The British, however, do not feel that staging nodular lymphoma & treating systemically offers any great advantage over treating the lesions as they develop. That relieves me of some responsibility & I would recommend local treatment for a probably nodular poorly differentiated lymphocytic type of lymphoma."

CASE #9. PLASMACYTOID LYMPHOCYTIC LYMPHOMA

(Contributed by Charles Dunlap, D.D.S., and Bruce Barker, D.D.S., University of Missouri-Kansas City, Missouri)

Most of the diagnoses suggested were malignant lymphoma. Some participants felt that this probably represents a tumor of plasma cells; including Dr.'s Whitten and King from S.I.U., Dr. Abrams from U.S.C., Dr. Boyle from the Medical Center-University of Missouri, & Dr. Berthrong, Colorado Springs. The greatest majority however, interpreted this lesion as a malignant lymphoma. Dr. Rosai from Minnesota stated, "Malignant lymphoma lymphocytic with prominent plasmacytic differentiation." Dr.'s Tarpley, Corio, and Crawford called it, "Malignant lymphoma (reticulum cell sarcoma)." Dr. Herb Taylor from St. Louis University called it, "Lymphoma." Dr. LeGal from Strasbourg, France called it, "Lympho epithelial tumor, malignant with plasmocytoma." Dr.'s Martinez and Archard from Alabama called it, "lymphocytic lymphoma." Dr. Sayers fromthe Eisenhower Medical Center called it, "Suggestive of Hodgkin's disease." Some dissenting opinions considered this lesion as an inflammatory process including Dr.'s Fay, Kolas, Sharbough, & Johnson from the Eisenhowed Medical Center. Dr. Rowe from Michigan called it, "Chronic granulomatous process." Dr. Shafer from Indiana offered, "My differential diagnosis would be lymphocytic lymphoma vs. Abel's lymphomatoid granulomatosis."

FOLLOW-UP: The patient is living presently at the University of Kansas Medical Center with a diagnosis of lymphosarcoma, lymphocytic type.