CASE #1  (45190, two slides)
Contributed by Dr. Miguel A. Simon, Anatomia Patologica, San Juan, Argentina.

Mass in the hard palate manifested by dysphagia and breathing difficulties. The tumor was removed (slide #1), however, it recurred within 6 months. The patient received radiation therapy and 1 year later is still alive, healthy and without evidence of recurrence.

CASE #2  (86-605)
Contributed by Noel Weidner, M.D., Assistant Professor, Wake Forest University, The Bowman Gray School of Medicine, Winston-Salem, North Carolina.

An 80 year-old, white female presented with a 2-3 cm polypoid mass attached to the post-cricoid laryngeal area. It was acting as a "ball-valve" blocking the esophagus. The patient was S/P 6000 rads to the area for squamous carcinoma of the esophagus (completed two years earlier in December 1983).

CASE #3  (86-2724)
Contributed by Ronald Oxenhandler, M.D., Department of Pathology, Memorial Hospital, Chattanooga, Tennessee.

64 year-old female with 4 mm nodule, lower lip. Overlying epithelium intact and dermatologist clinically thought it was a mucocele before biopsy. The punch biopsy was very firm. H & P unremarkable.

CASE #4  (86-582)
Contributed by Carlos Perez-Mesa, M.D. and Mo Duong, M.D., Department of Pathology, Ellis Fischel State Cancer Center, Columbia, Missouri.

This 12 year old caucasian boy developed swelling below the right ear 1 month before admission and subsequent formation of a nodule 2.5 x 2.5 cm in diameter. No pain or tenderness. The lesion was excised. Would you recommend further treatment of the area?
CASE #5  (PS85-4282)
Contributed by Ronald Oxenhandler, M.D., Department of Pathology, Memorial Hospital, Chattanooga, Tennessee.

42 year-old female with recent asymptomatic, less than 1 cm mass in upper lip with normal surface epithelium. Biopsy did not include overlying epithelium. Patient's H & P unremarkable. Mammogram negative.

CASE #6  (PS86-646)
Contributed by Frederick Volini, M.D. and Jonathan Hanson, D.D.S., St. Mary's Health Center, Jefferson City, Missouri.

HP 53 year old male that 5 years ago noticed a lesion in the hard palate which was diagnosed as pleomorphic adenoma. The patient refused treatment. The tumor continued to grow in size up to 2.5 cm producing local discomfort. It was removed at the base.

CASE #7  (S86-1216)
Contributed by Douglas Gnepp, M.D., Department of Pathology, St. Louis University Hospital, St. Louis, Missouri.

This 47 year-old female with a 20 year history of frontal headaches presented for evaluation after slight worsening of pain. She had no focal neurologic signs including visual deficits. CT scan revealed a large subfrontal mass extending across the midline. At operation the bulk of the tumor appeared subdural with extension into the brain on the left and extension through a defect in the cribriform plate. A relatively small amount of tumor was removed from below the cribriform plate but a major exploration was not performed. Post operative CT scans show the bony defect but no identifiable residual tumor in sinuses or nasal cavity.

CASE #8  (S2513-86 I5 TMC)
Contributed by Charles 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.

A 41 year old white male with a 25 year history of enlargement of the right side of his face. During his junior year of high school, he had part of his jaw "scraped off" at the University of Nebraska Dental School and understood it was a cyst. Growth was not noticeable by the patient during that time but we are led to believe there was gradual increase in size. First his second and third molars were removed because of constant cheek biting. About 6-7 years ago, he also grew a beard to cover the enlarged size of his face. In 1986, he was sent to an oral surgeon by his private dentist because his buccal mucosa on the same side was constantly irritated by his maxillary first molar. All laboratory studies were within normal limits including alkaline phosphatase.
CASE HISTORIES continued

CASE #9  (86-4685, 2 slides)
Contributed by Ronald Oxenhandler, M.D., Department of Pathology, Memorial Hospital, Chattanooga, Tennessee.

This set of slides correspond to the "benign" kidney tumor removed from the patient 10-3-78. Is this the source of the metastasis to the mandible or is this an unrelated lesion?

CASE #10  (86-730, 2 slides, Panorex film)
Contributed by Frederick Vollini, M.D. and Richard Graham, D.D.S., St. Mary's Health Center, Jefferson City, Missouri.

This is a lesion located in the right mandible of an otherwise healthy 4 year old boy. The lesion was pushing and elevating the gingiva. Panorex film is included. This case has not been completely studied, however, the physical examination was considered negative and the laboratory studies have so far not been contributory.
Dear Carlos:

These are my impressions on the cases from the pathology seminar 92:

**Case 1.** This is a high grade malignant tumor. Keratin stains should be done to rule out the possibility of a sarcomatoid carcinoma. It is too bad that the age of the patient was not included in the history.

**Case 2.** Carcinoma with sarcoma-like stroma (so-called pseudosarcoma).

**Case 3.** Mucoepidermoid tumor, very low grade.

**Case 4.** Mucoepidermoid carcinoma. Very typical case. If this excision was deemed complete by the surgeon, I would not recommend additional therapy.

**Case 5.** Malignant tumor. There is too much crush artifact to be specific about the cell type.

**Case 6.** Pleomorphic adenoma with marked squamous metaplasia and peculiar adipose metaplasia of the stroma.

**Case 7.** Esthesioneuroblastoma.

**Case 8.** Benign fibrous lesion, perhaps closer to ossifying fibroma than to fibrous dysplasia.

**Case 9.** If this spindle cell tumor is indeed of renal origin, it may well correspond to sarcomatoid carcinoma and therefore be a source of metastasis.
Case 10. Malignant small round cell tumor. Special studies are necessary to establish the differential diagnosis between lymphoma, metastatic neuroblastoma, Ewing's sarcoma and embryonal rhabdomyosarcoma.

I hope that things are going well for you. I am just back from a short trip to Mexico where I watched several games of the Soccer Cup, including Brazil/France and Argentina/England.

I recently met Dr. David J. Krutchkoff, who is the head of Oral Pathology at the University of Connecticut Health Center School of Dental Medicine, Farmington, Connecticut 06032-9984. He trained at Washington University at the time that I was there. I told him about your oral pathology seminar, and he manifested a great interest in it. If you can still spare an additional set, I'm sure that he would enjoy having his name added to your ever expanding list.

Best personal regards,

Juan Rosai, M.D.  
Professor of Pathology  
Director of Anatomic Pathology

JR/ams
"OFFICIAL" DIAGNOSIS

CASE # 1 SPINDLE CELL CARCINOMA (45190)
Contributed by Dr. Miguel A. Simon, Anatomia Patologica, Hospital Rawson, San Juan, Argentina.

There was an even division of diagnoses between malignant histiocytoma and spindle cell carcinoma or synonyms as sarcomatoid squamous cell carcinoma, Lane's tumor, etc.

A few opinions at random:

ABRAMS from USC, "I prefer spindling squamous carcinoma (sarcomatoid carcinoma) rather than some type of sarcoma."
WHITE from Kentucky, "Sarcomatoid squamous cell carcinoma."
LUMERMAN and ASSOCIATES from New York, "We favor a diagnosis of spindle cell carcinoma because of the exophytic nature of the specimen, the ulceration, the nuclear characteristics of the tumor cells and the presence of definite dysplasia of the overlying epithelium. In addition there are a few islands of atypical epithelium present within the substance of the tumor in its superficial portion."
EUSEBI from Bologna, "Squamous cell carcinoma with sarcoma-like stroma."
SCIUBBA and KAHN from Stony Brook, "Spindle cell carcinoma ("sarcomatoid carcinoma")."
WEATHERS from Emory, "Spindle cell carcinoma. One would also have to consider a Lane tumor. (Pseudosarcoma with overlying or even malignant histiocytoma, however, I feel that the diagnosis of spidle cell carcinoma is the most appropriate.)"

Others offered malignant histiocytoma: TOMICH from Indiana, SPRAGUE from Nebraska, HAMMOND and ASSOCIATES from Iowa and LOPEZ from Honduras.

Commentaries chosen at random:

DONATH from Hamburg, "I think it is a fibrosarcoma, but I am not sure - differential diagnosis neurosarcoma, rhabdomyosarcoma."
ROHRER and ASSOCIATE of Oklahoma, "Although this looks like a sarcoma, Tom and I think we found some areas which appear to be in the pattern of squamous cells. So, we would like to throw out the possibility that this might represent a spindle cell carcinoma."

FOLLOW-UP: The patient died a year later with brain metastasis.
CASE # 2  PSEUDOMALIGNANT GRANULATION-TISSUE REACTION ASSOCIATED WITH PREVIOUS IRRADIATION (86-605)
Contributed by Noel Weidner, M.D., Wake Forest University, The Bowman Gray School of Medicine, Winston-Salem, North Carolina.

Many agreed with the interpretation of Dr. Weidner including Abrams from USC, Solomon a resident from the University of Missouri Medical Center, Toto from Loyola, and Oxenhandler from Chattanooga.

Random commentaries are as follows:

Eusebi from Bologna, "Polyp with stromal atypia (benign)."
Kahn of Stony Brook, "Exuberant granulation tissue with radiation-induced pleomorphism."
Scuibba also from Stony Brook, "The features of nodular fasciitis are present with further change reflecting previous radiotherapy."

Dr. Weidner, the contributor, made the following commentary: "Immunohistochemical studies revealed vimentin and focal factor VIII-related antigen immunoreactivity in the atypical cells. They were negative for both low and high molecular weight cytokeratin (AE1/AE3). Even though atypical mitotic figures were present, flow-cytometric evaluation of paraffin-embedded tissue revealed a DNA index of 1.0 ("euploid"). However, a second case we have recently reviewed (courtesy of Fred Askin, M.D., University of NC) had a DNA index of 0.75 ("hypodiploid").

CASE # 3  MUCOEPIDERMoid CARCINOMA (86-2724)
Contributed by Ronald Oxenhandler, M.D., Memorial Hospital, Chattanooga, Tennessee.

There was uniformity in the diagnoses, however, it was classified as "low grade", "very low grade", "cystic, mucous retention phenomenon-no neoplasm."

A few commentaries chosen at random are:

Lumerman and Associates from New York, "Mucoepidermoid carcinoma, low grade. We have seen several lesions of this size before."
Rohrer and Associate from Oklahoma, "Tom and I feel this is a mucoepidermoid carcinoma, possible the world's smallest."
Waldron and El-Mofty from St. Louis, "A tiny mucoepidermoid tumor - very low grade ME carcinoma - needs a wider local excision but should have a good prognosis."

CASE # 4  MUCOEPIDERMoid CARCINOMA (86-582)
Contributed by Carlos Perez-Mesa, M.D. and Mo Duong, M.D., Ellis Fischel Cancer Center, Columbia, Missouri.

There was an overwhelming majority who agreed with the diagnosis. Two opinions were in favor of mucosebaceous adenoma; others included sebaceous adenoma, low grade sebaceous carcinoma with focal mucin-producing areas. This tumor was also mucoepidermoid carcinoma. Its malignancy was labeled as "low grade", "intermediate grade" and "high grade."
DONATH from Hamburg, "Mucoepidermoid carcinoma (clear cell variant)."

Should this patient be treated?

OXENHANDLER from Chattanooga, "I would classify this as a low to intermediate grade mucoepidermoid "carcinoma" and I personally would not recommend any additional therapy provided the resection margins were free. Apparently, as a group, intermediate grade carcinomas behave similarly to low grade carcinomas. This was reviewed fairly well in the recent book by Leon Barnes (Chapter by Peel and Gnepp). I would also be influenced in deciding whether additional therapy was warranted if lymph nodes were positive."

GNEPP from St. Louis University, "Intermediate grade mucoepidermoid carcinoma; no further therapy if completely excised. If not completely excised, then reoperate and do wide excision without a radical neck."

WALDRON and EL-MOFTY from Washington University, "Mucoepidermoid carcinoma - intermediate grade - I'm worried about the margins and believe I would want a wider local excision without doing the neck if this were my son."

CASE # 5 METASTATIC SMALL CELL CARCINOMA, PRIMARY BREAST (PS85-4282)
Contributed by Ronald Oxenhandler, M.D., Memorial Hospital, Chattanooga, Tennessee.

There were some comments about the quality of the microscopic preparation, however, many interpreted the lesion as metastatic carcinoma, small cell type.

A few commentaries at random:

LUMERMAN and ASSOCIATES from New York, "The quality of our sections were poor so it was difficult to get a good feeling of the cellular morphology. From what we could discern regarding the cellular appearance and the pattern of the specimen, we feel that we are dealing with a small cell carcinoma that most suggests metastatic carcinoma from the breast. If the breasts are actually found to be normal, the possibility of a metastatic lesion from the lung or elsewhere should be considered."

DONATH from Hamburg, "Small cell carcinoma (metastasis)."

QIN-XI from China, "Undifferentiated adenocarcinoma, metastatic."

WEATHERS from Emory, "Metastatic carcinoma consistent with origin from the breast."

FOLLOW-UP: Dr. Oxenhandler offered the following: Shortly after the lesion of the lip was biopsied, a mammogram was done and it was considered within normal limits. A biopsy from the left breast was performed showing no evidence of tumor. Subsequently, a year later another left breast biopsy was obtained which showed invasive lobular carcinoma with a similar appearance with the lesion in the lip.
CASE # 6 PLEOMORPHIC ADENOMA WITH SQUAMOUS METAPLASIA (PS86-646)
Contributed by Frederick Volini, M.D. and Jonathan Hanson, D.D.S., St. Mary's Health Center, Jefferson City, Missouri.

No disagreement concerning the neoplastic entity.

Random commentaries:

ABRAMS from USC, "This is a most unusual mixed tumor because of the prominent keratin formation. It resembles mixed tumor of skin origin. There is some calcification but it is in the keratin. On the basis of this slide it does not appear to have been completely excised."

HORI from West Virginia, "Pleomorphic adenoma with keratin cysts."

ROSAM from Yale, "Pleomorphic adenoma with marked squamous metaplasia and peculiar adipose metaplasia of the stroma."

HAMMOND, FINKELSTEIN, VINCENT and DEAHL from Iowa, "Trichoadenomatous pleomorphic adenoma."

SANTA CRUZ from St. Louis, "Pleomorphic adenoma, remarkable similarity to hair germ tumors (trichoblastoma)."

OXENHANDLER from Chattanooga, "Pleomorphic adenoma with extensive trichoepitheliomatous metaplasia."

CASE # 7 ESTHESIONEUROBLASTOMA WITH DUCTAL DIFFERENTIATION (S86-1216)
Contributed by Douglas Gnepp, M.D., St. Louis University Hospital, St. Louis, Missouri.

The majority agreed with the diagnosis. There were three responses, however, who offered different opinions:

"Believe this specimen represents a carcinoma of glandular origin suggestive of adenoid cystic carcinoma because of the portions of the sections which show a cribriform pattern."

"Adenoid cystic carcinoma in a pleomorphic adenoma."

"Feel this tumor is a central nervous system neoplasm, most likely an Astrocytoma."

CASE # 8 FIBROUS DYSPLASIA (S2513-86 15 TMC)
Contributed by Charles Dunlap, D.D.S. and Bruce Barker, D.D.S., University of Missouri-Kansas City, School of Dentistry, Kansas City, Missouri.

Many interpreted the lesion as "benign fibrous lesion", however, the lack of roentgenograms available to the consultants limited the range of their diagnostic possibilities. During the presentation of the case, Drs. Dunlap and Barker showed the roentgenograms of the lesion, which coupled with the microscopic slides, were convincing that the lesion was fibrous dysplasia.
There were numerous opinions, some of which were in favor of the kidney as the source of metastasis.

WEIDNER from Bowman Gray, "I believe the two tumors are different and unrelated. I accept Dr. Spjut's diagnosis of osteosarcoma for the jaw lesion; the renal tumor looks like a benign fibrous histiocytoma."

TOMICH from Indiana, "Retroperitoneal fibrous histiocytomas are, at times, histologically benign yet they metastasize. Perhaps this is the explanation for this very interesting case."

LE GAL from Strasbourg, "I feel that the two lesions are morphologically related. But that the lesion of the mandible is not metastatic of the kidney tumor. This later looks really benign. Should it be malignant, one would expect at least pulmonary metastasis. The name of the kidney tumor is not evident. I call it a storiform desmoplastic fibroma. But the fibroma of the kidney is exceedingly rare. Hence I favor a multicentric desmoplastic fibroma of the kidney and mandible with reactive or metaplastic bone formation in the later situation."

ROSAY from Yale, "If this spindle cell tumor is indeed of renal origin, it may well correspond to sarcomatoid carcinoma and therefore be a source of metastasis."

SPRAGUE from Nebraska, "Consistent with metatstatic sarcomatoid renal cell carcinoma."

LOPEZ from Honduras, "Lesion no relacionada."

Every consultant agreed in the malignant nature of the lesion. The variety of opinions includes: malignant lymphoma, Ewing's sarcoma, poorly differentiated small cell malignancy, malignant small round cell tumor, blue cell tumor, Burkitt's lymphoma.

FOLLOW-UP: The patient was seen in Barnes Children Hospital where subsequent studies show lesions in both sides of the mandible, both kidneys, and enlarged lymph nodes extending bilaterally from the nasopharynx to the level of the clavicle. A biopsy of the right cervical lymph nodes was done and the diagnosis of malignant lymphoma, lymphoblastic type was established. The Clinical Cell Marker Laboratory of the Department of Surgical Pathology at Barnes Hospital classified the lesion as "Profile consistent with a B cell lymphoid of lymphoblastic, pre-B type, (TdT, IgM, CD19, CD212, HLA-DR, LCA-positive)."