TENTH ANNUAL
ARTHUR PURDY STOUT SOCIETY SEMINAR
JUNE 1 - 1957
NEW YORK CITY

INTRODUCTION

The present meeting is unique in the history of this Society. In my opinion the record of its proceedings in the context of my profession is a waste of our time to consider. Of course, our cases sometimes try to bring in our unsuspected growth potentials in tissue and sometimes they illustrate an uninvited problem of the nature of the unexplained cellular origins of a tumor type. There is probably the best case in the group. These seminars have also served to bring to our attention cases which some of us have been able to solve. Occasionally some cases in the past have been clarified by subsequent events brought to our attention by the contributor. We would urge you to continue the practice of furnishing follow-up information about the cases you have contributed for it is invaluable in determining biological behavior which is so instructive for all of us.

I think I should acknowledge the Society upon having completed a decade of work of great price and satisfaction for me that so many of you were so kind and helpful to me in my work in the present and future years. I am sure that many of you also have a similar responsibility to the Society and to knowledge in this country. I hope that many of you also are in a position to make the standards which we have acquired together so that the final results of investigation and service for others can equal any have a chance to serve when our race is run.

Discussion of Cases

Arthur Purdy Stout, M.D.
INTRODUCTION

The present seminar, the Tenth in the history of this Society, in my opinion fully lives up to the record of its predecessors in its content of unusual and instructive cases. I do not feel it is a waste of our time to consider some unusual or bizarre cases because sometimes they bring to our attention unsuspected growth potentials in tissues and sometimes they illuminate an unsolved problem of the nature of the undetermined cellular origin of a tumor type. There is possibly one such case in the present group. These seminars have also served to bring to our attention cases which none of us has been able to solve. Occasionally such cases in the past have been clarified by subsequent events brought to our attention by the contributor. I would urge you to continue the practice of furnishing follow-up information about the cases you have contributed for it is invaluable in determining biological behavior which is so instructive for all of us.

I think I should congratulate the Society upon having completed a decade of seminars. It is a source of great pride and satisfaction for me that so many of you care to come back year after year to meet together for your mutual pleasure and instruction. I believe you represent an important nucleus for the dissemination of knowledge in this country. I know that many of you have trained others in the disciplines which we have acquired together so that the dual ideals of investigation and service for which we stand may have a chance to survive when our race is run.

Arthur Purdy Stout, M.D.
HISTORY: The lesion was first noted in the breast of this 21-year old colored female in April 1956 when the patient was 2 weeks post-partum. The excised specimen was diagnosed in another laboratory as some form of cystic mastitis. In November 1956 the patient noted a recurrence and was now four months pregnant. The lesion was excised and proved to be an encapsulated mass 6.5 cm. in maximal dimension. It was of rubbery consistency, homogeneous and gray-tan. Dr. Kay was able to compare this with a slide of the lesion removed in April and is convinced that the pathology is identical.
Cystosarcoma Phyllodes (Malignant Mesenchymoma Type) of Female Mammary Gland

MICROSCOPIC OBSERVATIONS: This tumor is compounded of two elements. The epithelial element consists of scattered ducts and perhaps an occasional acinus which are normal in appearance. Between them filling in all the rest of the tumor substance is a proliferation of heterogenous mesenchymal elements compounded of fibrous stroma and bizarre cells which are rounded, polygonal and occasionally elongated. Their nuclei are large hyperchromatic, sometimes multiple and mitoses are not infrequent. Most of the cells are surrounded by reticulin fibers. Capillaries are very varied; in some places there are hardly any while in others there are so many they seem an integral element of the tumor. With the trichrome stain, it can be observed that some of the cells have a granular acidophile cytoplasm and vacuoles vaguely disposed near the cell membrane suggesting rhabdomyoblasts. Other areas show cells with foamy cytoplasm which may be lipoblasts. The mucicarmine stain is negative. Fortune decreed that two attempts to get a Laidlaw stain should be unsuccessful.

DISCUSSION: Since this is a recurrent tumor and has carried the adenomatous elements along with it, I assume it is not just sarcoma infiltrating breast tissue but a cystosarcoma phyllodes. We ordinarily assume that the stromal element of a cystosarcoma phyllodes will be like fibrosarcoma. In this case it looks very different from what I recognize as fibrosarcoma even though there is a lot of collagen and reticulin in the stroma. I think I can detect cells which have the characteristics of rhabdomyoblasts, others which look like lipoblasts, and in addition there is the patchy proliferation of capillaries which seems part of the neoplasm although they are not sarcomatous capillaries. With such a mixture of malignant elements I would classify this as a cystosarcoma phyllodes of the malignant mesenchymoma type.

Our cases of cystosarcoma phyllodes have grown apace since Jane Lester and I reported 58 cases from the Surgical Pathology Laboratory. We now have 100 cases recorded at P. & S. and several more at Francis Delafield Hospital. Our 100 cases include one in a bitch. Jane and I called attention to the fact that metaplastic activity could be found including osseous and chondromatosus metaplasia but we did not think that this meant a malignant mesenchymoma because the bone and cartilage wore well differentiated. We have had one case in which in addition to fibrosarcomatosus areas there was a chondrosarcomatosus area and another case with an osteogenic sarcomatosus area. These we have recorded respectively as cystosarcoma phyllodes of chondrosarcoma and of osteogenic sarcoma types. There is one other malignant mesenchymomatosus cystosarcoma phyllodes in our files in addition to the present case.

When Jane and I compiled our study of cystosarcoma phyllodes we had to report that none of our 58 cases had metastasized to the axillary nodes. Of the 77 cases reported from Memorial Hospital by Treves and Sunderland one had a metastasis in one axillary node. There is also one example of axillary metastasis reported by Cooper and Ackerman. Now we have one such case to report. The case was studied by Dr. Arnold Statsinger of Wyckoff Heights Hospital. The metastasis was wholly sarcomatous. In spite of this one case out of 100, it seems to me that axillary metastasis is such a remote possibility that I hesitate to advise radical mastectomy in all such cases.

(continued)
The question of whether or not one can predict the relative probability of blood borne metastasis from the degree of differentiation of the sarcomatous elements in the primary tumor is still beyond me because of lack of experience. Perhaps the tumors with more malignant appearing sarcomatous areas are more apt to metastasize but from our experience it is also possible for cystosarcomas with good differentiation and borderline differentiation to metastasize so that one can never have complete assurance that such tumors will not metastasize.

ARTHUR PURDY STOUT, M. D.

Bibliography:


CASE 2.

HISTORY: Patient is a 43 year old colored woman, stated to have noted a lump in the breast for about five months, and to have noted enlargement of the lump recently.

At surgery, a mass of "bone" measuring approximately 6 cm. in diameter was removed. The pathologist who was called to surgery stated that she could see no tissue around this "bone".

No further information.
MICROSCOPIC OBSERVATIONS:

This tumor is made up almost exclusively of osseous tissue which I regard as osteogenic sarcoma because the cells in the lacunae and Haversian canals are almost without exception anaplastic sarcomatous cells. There are a few acini and ducts near the periphery. I have the impression that these are normal mammary ducts and acini which have been engulfed by infiltrative growth and are not an intrinsic part of the tumor as in cystosarcoma phyllodes. It is obvious that this is an infiltrating tumor for one finds cords of tumor cells invading between the fat cells of breast stroma at the periphery. This is not observed in the usual appearance of cystosarcoma phyllodes. The entire tumor appears to be osteogenic sarcoma and I cannot recognize in these sections any other tumor types.

DISCUSSION:

I have only once before seen a tumor like this in the breast and I know practically nothing about the case except that it appeared in sections to be purely osteogenic sarcoma and not part of a cystosarcoma phyllodes. The pathologist who studied the case stated that he intended to report it so that Hill and I could not use it in our study of sarcomas of the breast. This present case seems to me true osteogenic sarcoma and not comparable to Case 2 (P&S 51421) in last year's AFS Society Seminar, contributed by Bob Totten, which I interpreted finally as a fibrosarcoma with osseous and cartilaginous metaplasia.

You may recall that Fred Stewart in his fascicle on tumors of the breast expresses the opinion that the stromal elements of the breast as such do not produce malignant mesenchymal tumors but that all such are derived from the stroma of fibroepithelial tumors and that when a sarcoma appears pure it is simply an example of complete engulfment and disappearance of all epithelial elements. Fred is certainly entitled to his opinion, but I cannot agree he has any right to make such a dogmatic statement for it can neither be proved nor disproved. I cannot believe that the lymphosarcomas and malignant hemangiendotheliomas of the breast have not arisen de novo and not in the stroma of pre-existing fibroepithelial tumors. Moreover, there are simple lipomas encapsulated in the mammary gland without any admixture of ducts and acini; why is it impossible to suppose that some liposarcomas develop in the breast without any adenomatous elements?

ARTHUR PURDY STOUT, M. D.
Bibliography:

Couret, J.S.: Osteoid sarcoma of the breast.


Fine, G., and Stout, A.P.: Osteogenic sarcoma of the extra-skeletal soft tissues,


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Section IX, Fascicle 34, Atlas of Tumor Pathology
Pub. by A.F.I.P., Washington, D.C., 1950 (pp. 86-87)
CASE 3.

Arthur Purdy Stout Society
Seminar - June 1, 1957
New York City

Submitted by: Dr. Philip Flynn
#6527

HISTORY:
Male - Age 72

Patient gives a history of having had a lesion of the anterior chest wall for the past two years. This has been enlarging slowly, especially during the past year. Clinically and grossly this 3.0 x 2.5 cm. thick plaque resembles an ordinary carcinoma of the breast invading the skin. The excised specimen (9.0 x 5.0 x 3.0 cm.) includes skin and subcutaneous fat. There is an eccentrically placed nipple surrounded by a 1 cm. rim of brown areolar tissue. Immediately adjacent to areola is a large diffuse thickening of the epithelium, overlying a mass fixed to skin and measuring 3 x 2.5 cm. On cut surface it resembles an infiltrating carcinoma of the breast.
Fibrous Xanthoma (Malignant?) of Skin of Chest Wall

MICROSCOPIC OBSERVATIONS:

This is a growth involving the full thickness of the skin and extending for a short distance into the subcutaneous fat. It is largely fibrous and composed of bulky bands of collagen and reticulin fibers accompanied by spindle shaped cells like fibroblasts. These bands tend to run in various directions and interlace. Sometimes several bands meet at a common focal point and tend to be sharply deflected at an angle of 90° thus forming a whorl. One or two foci of calcification are present in some slides. The growth infiltrates so that fat cells and accessory skin structures are engulfed by it. Some of the spindle shaped cells are vacuolated and the Scharlach R stain is positive for lipid. This occurs only in foci and is not universal. There are a few places where there is focal infiltration of the growth by lymphocytes and plasma cells. Careful study shows two unusual features: the presence of bizarre anaplastic cells with large nucleoli some of which are multinucleate and an appreciable number of mitoses, a few of which are monstrous.

DISCUSSION:

While this is otherwise a characteristic fibrous xanthoma, the presence of the anaplastic cells and mitoses raises the question of malignancy. I think that histologically this has the characteristics of malignancy; the great question is: can it metastasize, and is it biologically malignant? I have to confess I know extremely little about this and one seeks in vain in the literature to find an answer to this query. The nearest I can come to a solution concerns the behavior of two reported cases of giant cell xanthomatous tumors of the hand. These tumors certainly are sufficiently related to the skin fibrous xanthomas to warrant a comparison. The first case was reported by Wright. It concerned a man who first noticed a small swelling on the palmar aspect of the right hand at the base of the index finger. It grew to a diameter of half an inch and six months after onset it was excised. In three weeks it had recurred, grew rapidly, and six weeks later the index finger and metacarpal bone were removed. Ten months after this second operation there was no further recurrence. The original tumor and the recurrence had the appearance of a giant cell tumor with mitoses. The recurrence had many mitoses, five were noted in one field, and the tumor was more cellular. I think this must be the case to which Willis refers in the first edition of his book: "Prof. M. J. Stewart has shown me a specimen of undoubtedly malignant synovioma of giant-celled type, which invaded neighboring soft tissues".

The other case was one reported by Flack of Tulsa, Oklahoma. It concerned a woman of 48 who for 10 years had permitted a tumor to grow in her hand until it covered the entire hand and measured 20 x 15 cm. There had been so much loss of blood and infection that the Hb was 1,500,000 and Hgb 3 grams. Amputation above the elbow was done from which she recovered and there was no follow-up. The AFIP called it a giant cell tumor and stated that metastases from such a tumor were unknown. We have records of another large tumor which developed in the hand and after a period of years almost surrounded the metacarpal bone measuring 7 x 5 cm.

You may recall that in last year's AFS Seminar, Case 6 was called a probable malignant giant cell tumor of the wrist and Case 9 a probable malignant fibrous xanthoma of the ankle. I referred also to five other possible malignant fibrous xanthomas or giant cell tumors, one of which was Charlec Farinacci's extraordinary fibrous xanthoma of the axilla which seemed to have involved an (continued)
axillary lymph node by direct invasion. All of these tumors had mitoses and were bizarre in one way or another but none was known to have metastasized. Only one case (P&S 50436) which was a bizarre kind of giant cell tumor of the sole of the foot and is recorded as Case 6 in the December 1955 New Jersey Seminar after two local recurrences developed lung metastases. I cannot say however that it is a tumor which is easily acceptable as a giant cell tumor. Therefore I have to say that I do not know any certain case of fibrous xanthoma or of giant cell tumor of hand, foot or synovial membrane that has metastasized.

I hope Phil will be able to follow this case to learn whether or not any metastases ever develop.

ARTHUR PURDY STOUT, M. D.

References:

Flack, F.L.: Giant cell tumor of tendon sheath.

Willis, R.A.: Pathology of tumours.

Wright, C.J.E.: Rapid recurrence of giant-cell synovioma of tendon sheath.
HISTORY: Female, Age 56.

Patient was seen in doctor's office 1-5-57 with complaint of spotting of blood of two weeks duration. On pelvic exam, the cervix appeared atrophied with some irritation in the fundus of the vagina. Bimanual examination revealed a large cystic pelvic mass filling the cul-de-sac and extending up to the umbilicus. Could not determine whether this was attached to the left or right side. Patient noticed considerable pelvic pressure but felt well otherwise. There was some tenderness in the lower abdomen. There was positive serology; the blood count and urinalysis were within normal limits. Surgery on 1-9-57. Under general anesthesia pelvic examination was done and the surgeon was unable to find the cervix so he had to cancel his ideas of a curettage and biopsy of the cervix because he could not find the external os, but he found a cystic mass protruding into the fundus of the vagina. There was nothing to suggest malignant disease so he did not take a biopsy.

The abdomen was opened through a left rectus incision, from symphysis to umbilicus. After removing many adhesions and getting the omentum out of the way, the fundus of the uterus was found extending almost to the umbilicus and it was hard and tense, being filled with fluid. The cul-de-sac was completely filled with a distended uterus. The left ovary was identified and found to be a quarter of an inch in diameter. The right ovary was not found. Even though the surgeon knew there was danger of disseminating tumor cells from the contents of the distended cystic uterus, he still went ahead and aspirated through a gall bladder trocar and suction, obtaining about 200 cc. of serosanguinous fluid. The trocar was removed carefully and the hole inverted and sutured together. He says there was no spillage. With an assistant's hand in the vagina, the surgeon then carried on a sharp and blunt dissection and removed this uterine mass from the pelvis.

The specimen, on arriving at the laboratory, represented an hour-glass structure weighing 580 gm., and measuring 17 x 9 x 5 cm. It was cystic. When opened it contained chocolate-like fluid and after the fluid escaped the specimen then weighed only 220 gm. Attached to this mass are two small fallopian tubes and a small ovary, measuring 2.5 x 1.5 x 0.6 cm. At the inferior pole of this cystic structure the wall varied from 1 to 2 mm. in thickness and at its thickest point measured 19 mm. in thickness. It appeared as though the uterus was the site of a large hematomata. The cervix was not identified, but sections were taken from the inferior portion on the chance that the cervix might be there and lost to identity. A great deal of necrotic material was found within the uterine cavity and some of this was papillary in nature, friable. It was easily detached from the wall of the uterus but some of it was still attached and stayed that way. The slide represents areas of the attached papillary uterine tumor.
Clear Cell Carcinoma of Corpus Uteri

MICROSCOPIC OBSERVATIONS:

The only important feature in the section available to me is the replacement of the endometrium by a growth composed of "clear" cells with foamy cytoplasm arranged in irregular glandular formations. They are supported by a fibro-vascular framework which is utterly unlike endometrial stroma. Two ordinary endometrial structures at widely separated points are the only remnants of normal endometrium that remain. The cells lining these normal glands do not have "clear" cytoplasm like the tumor cells. The tumor cells have small nuclei and voluminous cytoplasm. The cells vary from small cuboids to short cylinders. I have not been able to detect any mitoses. Where there have been hemorrhages many of the cells appear laden with brown hemosiderin granules. I have been unable to recognize cilia on any of the cells. The growth appears confined to the endometrial zone and in my section there is no evidence of invasion.

DISCUSSION:

In attempting to elucidate this peculiar appearance of the endometrial epithelial tumor, it seemed to me it is necessary to consider several possibilities. First, can this be a change in the endometrium due to hormonal activity either elaborated by the woman herself or given in treatment? Nothing in the history suggested to me that either hormones or x-ray have anything to do with it. Second, can this be a metastatic tumor in the uterus? There is nothing in the history or description of the specimen which suggests an origin from ovary, kidney, adrenal or anywhere else. We are left therefore with the probability that this is a primary carcinoma of the endometrium. If so, it has indeed a bizarre appearance, being composed as it is entirely of clear cells.

Since this type of uterine carcinoma was unknown to me I set about trying to get some clue to it. I have been astonished at my ill-success. I looked through all of my reprints and also at a number of texts of Pathology, Gynecology and Neoplasms. I found nothing in any of these with the sole exception of an illustration of an adenocarcinoma of the corpus showing a tumor compounded in part of ordinary cancer glands and in part of a small focus of cancer glands composed of clear cells with small nuclei resembling these. The text is by W. Schiller and it appears on page 1150 of Anderson's text book of Pathology, 1948 edition. No notice of these clear cell glands appears in the text.

I next tried to find out if clear cells appeared normally in the endometrium. I found a most entertaining study of the clear ciliated cells that occur as scattered units in the endometrium, in a paper by Hamperl. These cells are only relatively "clear" so that they do not seem to me strictly comparable to these tumor cells and of course the tumor cells are not ciliated. Nevertheless it seems possible that the tumor might arise from such cells. He compares them with the ciliated cells found in the tube and the nasal mucosa. He makes no suggestion as to the origin of the clear ciliated cells. The other paper which might apply, by Novak et al., suggests that the clear cell hypernephroid tumors of the ovary are not the only tumors of mesonephric derivation. He claims to have found tumors of probable mesonephric origin also in the broad ligament, the cervix uteri and the vagina. He has apparently not found any in the corpus uteri.

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Just as I completed writing the above, the long delayed January-February 1957 issue of CANCER appeared containing Saul Kay's article on this subject. It seems sure that the two cases of clear cell carcinoma which he reported in the cells of which he demonstrated glycogen are the same as this case. He expresses the belief that the glycogen secretion on the part of the tumor cells is a manifestation of a progesterone-like hormone. If this is true, one wonders why the isolated single units of normal endometrial glands scattered at intervals among the tumor cells are not also lined by foamy cells. While Saul may be correct in his hypothesis that these tumors are secretory carcinomas arising from ordinary endometrium, I would still like to believe in the possibility that they may arise from mesonephric rests in the endometrium.

ARTHUR PURDY STOUT, M.D.

References:


HISTORY: Female - white. Age 34.

Solid tumor of left ovary. Following a frozen section, a total hysterectomy and removal of all adnexa was advised. In addition to the ovarian tumor, there was found subsequently a microscopic carcinoma of the endometrium, and endometriosis of the posterior wall of the uterus.
Papillary Cystadenoma (Ciliated), with Squamous Metaplasia of Ovary. (Malignant?)

MICROSCOPIC OBSERVATIONS:

Sections of the ovarian tumor show that it is composed of a congeries of glandular structures which show a free inter-anastomosis with some papillary formations. They are lined in general by one or two layers of cylindrical cells. Many of these cells have cilia on their luminal poles. None seems to be a goblet cell but in many of the lumens is an amorphous material stained a deep red by mucicarmine. In several places these lining cells have undergone squamous metaplasia. After considerable search, I found mitoses fairly frequent in some areas but rare in others. In the endometrium there is a tiny focus between one and two mm. in diameter which projects into the lumen and is composed of glands resembling those in the ovary except that there is no squamous metaplasia. The cilia are much harder to recognize but I think some cells are ciliated. It looks different from the surrounding normal endometrium but whether these glands are strictly comparable to those in the ovary, I am not sure. This lesion in the endometrium is what is referred to in the history as carcinoma.

DISCUSSION:

I have tried but without much success to find a description of a comparable tumor. Adenocarcinomas of the ovary have been described by Melody, Faulkner and Stone and by Kuzma whose case was associated with endometriosis of the ovary. No cilia were described in any of these cases, although the illustrations show glandular tumors that resemble this tumor. The authors evidently intended to convey the idea that these were carcinomas with squamous metaplasia although there was no proof of malignancy in any of the cases.

When Willis discusses what he calls benign fibropapillary tumors of the ovary (which I believe correspond with Barzilai's endosalpingioma) he makes the statement that sometimes the covering epithelium is ciliated. He also states that the cells can sometimes secrete mucus. He expresses the opinion that such epithelium is not of Wolffian origin like the structures in the broad ligament. If it were not for the cilia I would unhesitatingly classify the ovarian tumor as a carcinoma because of the way the tumor glands form freely anastomosing complexes. Do the cilia mean that the tumor is of such a high degree of differentiation that the cell groups are incapable of metastasis? I do not know the exact answer to this but I presume that it does not mean they cannot metastasize and that the tumor has the potential of metastasis. We must ask ourselves what if any is the relationship of the small pedunculated tumor in the endometrium whose cells are also ciliated. Are they independent, or is one metastatic from the other? I do not see how a positive statement can be made either way because there is no possibility of proof. It can be stated however that foci of tubal epithelium have been described in the uterus and perhaps this focus represents such a heterotopia with glandular hyperplasia. I doubt very much if the uterine lesion is a carcinoma.

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I am unable to state the exact derivation of the ciliated cells in the ovary. Cilia are frequently found on the epithelial lining cells of many embryonal cystic structures in the pelvis, so I suggest that these ciliated cells in this ovarian tumor are probably embryonal in origin, but from which of many different possible sources, I do not know.

ARTHUR PURDY STOUT, M.D.

References:


CASE 6

Arthur Purdy Stout Society Seminar - June 1, 1957

New York City

First admission: May 1951. Male, age 59. Patient noticed a mass in scrotum above left testis about six weeks ago, which has grown rapidly. No pain or tenderness. At operation, the testis appeared normal but a mass was found above it. Within the mass was a hard nodule about the size of the testis itself. The tissue around the mass resembled a hernial sac, but dissection showed no sac to be present. The specimens removed consisted of: (1) A testis which appeared normal. (2) A firm mass of rubbery consistency, about 5.0 x 3.5 x 4.0 cm. in diam. The outer surface is smooth. The cut surface is homogeneous, grey. (3) A cord-like structure 12 cm. in length, in the middle of which are two nodules, each about 1 cm. in diam., similar to the main mass. Microscopically, the large mass and the two smaller ones are similar. The specimen submitted is from the large one. This furnished material for Case 7 of the A.P.S. Seminar, 1952.

Second admission: February 1954. Left abdominal mass for 2 months. At operation, a mass 10 x 12 cm. was removed from the retroperitoneal space behind the internal ring. Histologically, it was similar to that removed in 1951.

Third admission: March 1954: Swelling and serous discharge from operative site. No tumor found.

Fourth admission: July 1956: For last 10 months there has been recurrence of nodules in left groin. For 4 months, a mass in the left lower quadrant. At operation, there was a bi-lobed retroperitoneal mass, well encapsulated; a second, hard, non-encapsulated mass in the abdominal wall near the previous incision; and a third mass lateral to the second.

The tumors were similar in appearance. The cut surfaces were firm and trabeculated. Some were grey, others yellow. Most had a thin fibrous capsule.
Malignant (?) Mesenchymoma (?), Recurrent, of Retroperitoneum

MICROSCOPIC OBSERVATIONS:

There are four slides, two labelled B and one each labelled A and C. I presume they came from the three pieces of tissue removed. Section A, the largest piece, seems to be composed largely of fibrous tissue with an impressive degree of infiltration by plasma cells and lymphocytes, occasional neutrophiles and rare eosinophiles. In addition to these there are some very large syncytial masses with a few small and sometimes pyknotic nuclei. These cells are filled with acidophilic bodies which are sometimes rounded and sometimes amorphous or polygonal. The fibroblasts are usually benign in appearance but occasionally of giant size and perhaps anaplastic. The two slides labelled B differ from A and from one another. None of the acidophilic syncytial masses are present and very little inflammatory cell infiltrate. Instead osteoid and cartilage have been formed; in one section this is all well differentiated and does not appear neoplastic. In the other, however, there is a good deal of neoplastic cartilage formed and with it a proliferation of fibroblastic and giant cells which seem anaplastic and malignant. The slide marked C has two pieces of tissue; one seems only inflammatory and granulomatous, while the other has a focus of what looks like pure myxoma.

DISCUSSION:

When I studied the first tissue removed from above the testis in 1952, I did not really know what it was but suggested that it might be a benign fibrous mesothelioma. Obviously that was a bad guess. It has proved not to be benign and possibly not a mesothelioma. But I must say I am just as bewildered by it now as I was then. Of the new material nodule B certainly seems to be neoplastic and histologically it seems to me more like a chondrosarcoma or a mixture of osteogenic and chondrosarcoma than anything else. But how is one to interpret lesion A? That looks largely like a granuloma of some sort and the only feature that suggests it may be neoplastic is the presence of the giant cells with bizarre and anaplastic nuclei. I am still unable to interpret the large cells with acidophilic material in them unless that material is a derivative of blood pigment.

Reviewing all of the evidence, it seems to me that there must be a neoplastic element in this case and that the granulomatous portions as shown in Section A are incidental rather than dominant. But I do not feel confident of this and I do not know what name should be given to it if it is neoplastic. It seems to be entirely mesenchymal in origin but are the bone and cartilage dominant elements or metaplastic? And is it really malignant? I will say probably to this last query because of the biological behavior. And for want of a better name, I will call it tentatively mesenchymoma (?), malignant (?). Cases like this should not occur!

ARTHUR PURDY STOUT, M. D.
HISTORY: A 62-year old white woman entered the hospital complaining of right sided pain. There was a previous history of ptosis of the right kidney for about 5 years. Six months prior to admission the patient began to notice swelling in the right side of the abdomen associated with pain on standing or walking. During the past few weeks there was appearance of hematuria.

On physical examination a huge mass was present in the right upper quadrant extending down almost to the pelvic brim. At exploration a neoplasm involving the right kidney was found, and the tumor extended beyond the renal capsule, and involved adjacent areas. The patient expired on the table, and no autopsy was obtained. An intravenous pyelogram performed in May 1952 showed a suspicious right renal neoplasm, but this film was unavailable to compare it with the present data.
Carcinosarcoma of Kidney

(ME (PSEUDOSARCOMATOUS RENAL CELL CA)

MICROSCOPIC OBSERVATIONS:

This tumor has two distinct parts to it. One is made up of cords of large pale cells with cytoplasms varying from foamy through part foamy and part acidophilic granules to entirely granular. The nuclei vary in size, usually have large nucleoli and show occasional mitoses. These cell cords are separated one from the other by delicate fibrovascular septa and there are no fibers between the individual cells. The other portion of the tumor is quite different. It is made up of short plump spindle shaped cells with correspondingly shaped nuclei showing mitoses and an acidophilic cytoplasm. In some of the cells exceedingly fine delicate fibrils are present resembling myofibrils. In most places these cells are separated one from the other by reticulin fibers which are usually delicate but in some areas the connective tissue with collagen fibers has widely separated the cells producing an effect of tumor fibrosis. These cells also show mitoses. While in most places the two tumor types seem completely separated, at one point cords of the large pale foamy cells are found among the spindle shaped cells.

DISCUSSION:

Just as I began to study this tumor, the fascicle on Tumors of the Kidney of the Atlas of Tumor Pathology reached me and I thought I could find an adequate discussion of this peculiar compound tumor. But alas, it was not to be; I could find no mention of such a combination and if it is there I must have overlooked it. However, a tumor comparable to this has been described by a former pupil of mine and Masson's right-hand man, Riopelle. He called it a carcinosarcoma and pointed out that it developed in a 70 year old woman, was in the left kidney extending down to the rim of the pelvis, and was composed in part of a true hypernephroid carcinoma of the kidney and juxtaposed a leiomyosarcoma. But although side-by-side they did not intermingle. The sarcomatous elements alone metastasized. In the same kidney there was a fibromyolipoma. In the left ovary was a theca cell tumor. It seems to me that the present tumor is entirely comparable to Riopelle's tumor. Since he chose to call it a carcinosarcoma, I am willing to follow suit, although perhaps it might have been somewhat more accurate to consider the two tumors in collision and use the term collision tumor. The term "true hypernephroma" has also been discussed by Riopelle. He believes it to be much less malignant and less apt to metastasize than the ordinary hypernephroma. According to Riopelle, Stout discussed this variant of kidney carcinomas as long ago as 1937.

ARTHUR PURDY STOUT, M.D.

References:


CASE 8

Arthur Purdy Stout Society
Seminar - June 1, 1957
New York City

SUBMITTED by: Dr. John W. Pickren
(#354756)

HISTORY: Male, middle-aged, with mass in region of sublingual salivary gland. The surgeon states that he traced the duct into the mass.

DISCUSSION: It is quite obvious we are dealing with a most unusual tumor, one that must be called a pseudotumor. I know of only one tumor like this in the literature. It was reported by Jurmain and Paps in 1925. The patient had had a mass on the left side of the face since youth and had been slightly hampered since he was 15 years of age. The growth had been biopsied at age 56 and revealed a probable thyroid. At age 65 he began to have chronic cough and stridor. Today showed the trachea and larynx displaced for to the right. When examined at the age of 76 the tumor was excised, infiltrated, and very white. The histologic examination showed that this is in all probability a differentiated squamous carcinoma and the tumor a benign thymicoma.

ANTHONY PURDY STOUT, M.D.

(References are next page.)
Rhabdomyoma of the Submental Region

MICROSCOPIC OBSERVATIONS:

This interesting tumor is made up of large cells with finely granular acidophile cytoplasm and one or more small usually eccentrically placed nuclei which fail to show mitoses. The cells vary greatly in relative size from large to giant forms. They are separated one from the other by reticulin fibers which seem to surround each cell so that no cell masses are present. Many of the cells are vacuolated; the vacuoles vary from small round defects to a hollowing out of almost the entire cell leaving only a rim of cytoplasm about the periphery. After careful study, especially of trichrome stains, it becomes apparent that some of the cells have cross striations affecting a small or large part of the cytoplasm. Since these formations are perfectly aligned one must be convinced that this is no figment of the imagination but actual and real. The cells are differentiated rhabdomyoblasts and the tumor a benign rhabdomyoma.

DISCUSSION:

It is quite obvious we are dealing with a most unusual tumor, one that must be called a rhabdomyoma. I know of only one tumor like this in the literature. It was reported by Parsons and Puro in 1955. The patient had had a mass on the left side of the neck since youth and had been slightly hoarse since he was 15 years of age. The growth had been biopsied at age 54 and called a probable thymoma. At age 68 he began to have chronic cough and dysphagia. X-ray showed the esophagus and trachea displaced far to the right. When excised at the age of 74, the 10x6x3 cm. tumor was multilobulated, encapsulated, and lay within the thinned sternohyoideus muscle. Histologically it looked exactly like the present tumor. In our own collection there is also one tumor that looked partly like this. It developed just beneath the skin of the left upper lid of an 8-year old boy and measured 13x6 mm. It recurred after excision. However, in addition to the rounded rhabdomyoblasts there are also some less differentiated forms so that it cannot be regarded as a benign rhabdomyoma. (PH SP 69206). Another case was sent me by Dr. Philip Lecomte. The small tumor developed on the bridge of the nose between the eyebrows of a 16-year old man. It is composed of both rounded cells like the present tumor and strap-shaped cells but cross striations and granules are lacking (P&S 52608). Finally I have had a letter from a Dr. K. A. Misch of the Lister Hospital, Hitchin, Herts, England, telling me he had a rhabdomyoma of the tongue which he proposes to report but not sending me a slide. He asked me for literature and I append a list of possible cases that I found and sent him. None of these, however, is exactly like this case or that of Parsons and Puro. There is another feature to these two cases which seems to me of extreme interest; that is the presence of many granules in cells which certainly also have cross striations. Does this not suggest that the granular cell myoblastoma may indeed be a rhabdomyoma?

ARTHUR PURDY STOUT, M. D.

(Please see next page for References)
References


CASE 2

Arthur Purdy Stout Society
Seminar - June 1, 1957
New York City

Submitted by: Dr. Wm. L. Lehman
(B-25152)

HISTORY: 16-year old girl, married, with a pigmented lesion on
the buttock, present for an unknown period of time.

Although there have been a few, quite comparable, to this one, cases before
in the A.P.S. Society Background, Case 1, 1950 Seminar, the lesion, contributed by
Charles Manacoc, has at least still nothing more comparable as to how they should be
interpreted and whether or not they are malignant tumors. The 1950 case developed
in the sacral region of a 20-year-old girl, and in this present case, the superficial
part of the lesion looked like a blue nodule, while in the deeper there were
cells of the same type as others, but were so situated that they could be grouped into
epidermis. It was suspected that the 1950 tumor was malignant because of a later
time. My suspicion does not preclude, a similar nodule was found near the skin in
the abdominal wall. However, in this case situation it was believed to be a nevus
and not a second primary tumor.

Tumors such as these, too, I have liked to call "squamous epidermoid"
nevi. The term is not new, it is not one that I have ever heard anyone else use.
The unusual is that the nevus does not give rise to metasis or any evidence of
tumor behavior. At least it has the potentiality to metastasis. But I do not feel that I
can argue with any consistent proof of this to be certain. For example, in this patient
and other discussion, I have not been able to detect changes in the cells of squamous
epidermoid nevus, nor do they bear large stocks of tumor cells in the field of study.

According to the data available, the nevus is not malignant or benign of tumor such as this.
Case 9 - P&S 55248.

Contributed by Dr. William L. Lehman
Good Samaritan Hosp., Portland, Ore. #B25152

Compound Blue Naevus of Gluteal Region, (malignant?)

MICROSCOPIC OBSERVATIONS:

This tumor is made up of two parts each quite different from the other. The more superficial part lies in the corium and extends up to the sub-papillary layer but is not in contact with the epidermis. It is made up of masses of very long slender branched melanoblasts filled with melanin granules accompanied by differentiated connective tissue and associated occasionally with rounded phagocytes filled with melanin. These groups tend to surround the normal adnexal structures but they are also found in the corium between them. It is interesting to note that most of the hair follicles contain from 2 to 5 hair shafts. The overlying epidermis has a normal amount and distribution of pigment. The deeper part of this growth which interdigitates to some extent with the above described superficial portion has a quite different appearance. It consists of cords of cells which are plump spindles, packed together with hardly any reticulin fibers among them and with only a sparse powdering in a few cells of very fine granules of melanin. Surrounding the cords are many histiocytes loaded with large granules of melanin and a sprinkling of the long branched melanoblasts found in the superficial part of the tumor. Although there is some variation in the size of the nuclei and the depth of their staining, I have not been able to find any mitoses or large nucleoli.

DISCUSSION:

Although we have had a case quite comparable to this one once before in the A.P.S. Society Seminars (Case 3, 1950 Seminar, P&S 31412, contributed by Charlie Farinacci), there still remains some uncertainty as to how they should be interpreted and whether or not they are malignant tumors. The 1950 case developed in the sacral region of a 20-year old male. As in this present case, the superficial part of the tumor looked like a blue naevus while in the depths there were cords of the common type of naevus cells which are presumed to be derived from the epidermis. It was suspected that that 1950 tumor was malignant because at a later time, if my memory does not betray me, a similar nodule was found deep to the skin in the abdominal wall. Because of its deep situation it was believed to be a metastasis and not a second primary tumor.

Tumors such as those two I have liked to call compound blue naevi. I have felt it was important to separate them from pure blue naevi because while the pure blue naevus apparently does not give rise to metastases, the compound blue naevus at least has the potential ability to metastasize. But I do not feel that I have sufficient proof of this to be certain. For example, in this present case under discussion, I have not been able to detect mitoses in the cords of spindle-shaped melanoblasts, nor do they have large nucleoli, nor exhibit sure evidence of anaplasia. I hope with all the experts on moles and melanomas present we may be able to assemble definitive information about the potential malignancy or benignancy of tumors such as this.

ARTHUR PURDY STOUT, M. D.
CASE 10

Arthur Purdy Stout Society
Seminar - June 1, 1957
New York City

Submitted by: Dr. Zent Garber
(#131149)

HISTORY: A 42-year old right handed carpenter presented a mildly tender mass on the ulnar aspect of right 4th digit over the proximal phalanx. This he had noted about two months before and in the interval it had increased 3-to-4 times in size. It was not movable on the bone. Overlying skin was faintly tinted red. Roentgenogram showed a soft tissue swelling and no erosion of bone. At operation the mass was found to be firmly attached to skin and the neurovascular bundle; on the deep side it was in close relation to bone but could be peeled from it.

Specimen was a somewhat rounded rough-surfaced piece of pinkish red tissue measuring 25 x 13 to 17 x 11 mm. Attached to it was some adipose tissue and a blood vessel 1.5 mm. in diameter. Tissue at the margin of the specimen was soft in consistency but centrally and near one end was an indistinctly outlined firm part measuring about 12 x 12 x 9 mm. and presenting in cross section white glistening tissue of fibrous texture with some irregular linear and whorl markings.
Fibrositis Ossificans (Pseudo-Osteogenic Sarcoma) of Hand

MICROSCOPIC OBSERVATIONS:

The enlargement in this case does not seem to be due to a definite tumor but to a rather extensive fibroblastic proliferation in which a very considerable amount of cellular osteoid has been formed. Although it is very cellular it seems to me quite orderly and without any suggestion of malignancy. Passing through the involved area are a number of very thick walled veins, arteries and arterioles about which are concentrically layered laminated fibrous tissue. A number of sizable nerves also pass through. Some of these show a proliferation of capillaries and fibrous tissue between the sheaths of the nerve bundles and one has become so thick and tortuous that it resembles neurofibroma. A Pacinian body also shows peripheral fibrous proliferation.

DISCUSSION:

Since this process has not occurred within a voluntary muscle, it cannot be called myositis ossificans. Since the process is quite comparable, I think it has to be called fibrositis ossificans. I would also classify it as a pseudo-osteogenic sarcoma as Jerry Fine and I did in our paper on osteogenic sarcoma of the soft tissues. The involvement of the nerves and vessels in the process of fibrosis is most interesting, especially the thickening of the nerves so that some of them resemble neurofibroma. I do not recall before having seen a process so closely resembling neurofibromatosis in a diffuse fibrous growth of this sort. The etiology is quite beyond me.

ARTHUR PURDY STOUT, M. D.

Ref:

HISTORY: A 31-year old Italian-born woman noted a mass on the medial aspect of the left leg just below the knee increasing in size during past 6 months. Not painful or tender.

The mass is about 4 cm. in diameter, firm, and is fixed just below the inner condyle of the left tibia. Physical exam. also discloses unequal pupils, a speech disturbance, a positive Romberg sign, ataxia and bilateral Babinski reflexes - diagnosed by neurological consultant as "congenital cerebellar disease in general nature of Friedrich's ataxia". Wasserman negative.

X-rays demonstrate erosion of the medial aspect of the tibia by a soft tissue mass with a small linear calcification.

At operation a well circumscribed tumor is found beneath the deep fascia extending to the bone where it is said to be attached to the periosteum. Though the bone does not seem to be involved by the tumor a layer of bone is removed by curette.

The mass is roughly discoid, measuring about 6.5 x 5 x 2.5 cm, with a nodular surface which is largely enclosed in a fibrous capsule though this has been broken on the deep surface. It is composed of confluent nodules of quite firm, usually glistening white tissue with poorly defined yellowish soft centers in the larger nodules.
Mixed Tumor of Deep Tissues of Leg

MICROSCOPIC OBSERVATIONS:

This tumor is composed largely of a fibrocartilaginous matrix scattered through which are rounded cells resembling immature chondroblasts. While many of these are isolated, there are also many groups and some of these form cords with suggestions of lumen formation. I still thought this was simply a vagary of chondroblastic growth until I came across two or three tiny groups of darker cells which formed unmistakable lumens and were without doubt epithelial formations of the salivary gland type found in mixed tumors. Some of these glands were sufficiently like cylindromatous formations to confirm this opinion.

DISCUSSION:

There is no doubt about the fact that this tumor was beneath the deep fascia and had no relationship with the skin if the history is credible and I see no reason to doubt it. How, then, can a salivary gland type tumor develop in this situation if it is not a metastasis? We are not told whether or not a search was made for a primary malignant mixed tumor elsewhere but for me this growth is so well differentiated that it does not suggest a malignant tumor either primary or secondary. It seems to me that the problem of accounting for this tumor is much the same as confronts those who try to account for the so-called adamantinomas in the tibia and other long bones. We may suggest that there was a heterotopia of sweat gland epithelium in this deep situation. Congenital heterotopias of skin as a malformation have resulted in dermoid cyst formation in some parts of the body. I have not heard of dermoid cysts in this situation. Even if this was a mixed tumor arising from the sweat glands of a dermoid cyst, it would seem to me extremely unlikely that no trace of the cyst would remain especially since this is apparently a benign tumor. Epithelial elements of the skin have been transplanted by trauma into deeper situations such as the subcutaneous tissues. When this occurs and the epithelium survives it invariably forms a cyst lined by squamous epithelium. There are no records to my knowledge of the transplantation of sweat glands into deeper tissues with their survival as such. Moreover, there is no history of trauma in this case. It might be suggested that this originated here as a cartilaginous tumor that formed the epithelial elements by metaplasia. While it has been suggested that mixed salivary gland tumors are primarily epithelial and that the cartilaginous and myxoid elements develop from them by metaplasia, I have never heard the reverse suggested and one would like to have some support before supposing such a thing possible. I have to confess that I have no good explanation for this tumor which is unique in my experience.

ARTHUR PURDY STOUT, M.D.
HISTORY:

Male - Age 34.

One year ago, had a mass "enucleated" from the anterior aspect of his elbow, apparently measuring 1 cm. in diameter. Unfortunately, the specimen was not submitted for microscopic examination.

One year later the patient returned with a mass in the same area, freely movable, just beneath the skin, approximately 1 cm. in diameter. The scar is not involved. There is no regional adenopathy. Chest films are apparently normal.
MICROSCOPIC OBSERVATIONS:

This tumor is largely composed of rather solid masses of polygonal tumor cells closely packed together in islands and lobules, separated by bands of fibro-vascular tissue. The closely packed cells have no fibers between them as demonstrated by the Laidlaw stain. Mucicarmine shows no evidence of mucoid secretion although in some places the cells have an overall faintly pinkish hue. There are but few multinucleate forms. The relatively large number of mitoses is striking. Along one margin of the section the tumor undergoes a striking change; the cells suddenly become spindle shaped with reticulin fibers paralleling their long axes, they become more loosely arranged and a myxoid element staining deeply with mucicarmine suddenly fills the wide intercellular spaces. Many mitoses are found here so that certainly it is still part of the tumor. In another section, unfortunately not available for the seminar sets, there are areas in this same tumor where the spindle shaped cells are widely separated by a myxoid stroma that in one place at least has the aspect of cartilaginous matrix.

DISCUSSION:

I confess that the more I have studied this tumor, the more it has confused and puzzled me. When I first looked at it, because of the way it grew forming multiple nodules and with the myxoid and cartilaginous matrix, I thought it might be a chondrosarcoma. Then I came upon the large areas of cuboidal cells without any fibers between them and packed together in solid balls; I thought it must be an epithelial tumor, possibly a sweat gland carcinoma. Finally I have reached the conclusion that perhaps both ideas may be justifiable, but since it is necessary to combine them, this must be a malignant mixed tumor of sweat gland origin. This conception does not make me happy, for as far as I can recall, I have neither seen nor read of an unmistakable malignant mixed tumor of sweat gland origin. There is one case contributed by Maurice Richter to the 1954 A.P.S. Club Seminar (Case 10) which developed in the abdominal wall and which may have been a malignant mixed tumor since after removal eight years before and a recurrence removed six years before, it again recurred and was removed. But we do not know whether or not it was a skin tumor and I cannot be sure that it is a malignant mixed tumor.

We have recorded 23 definite mixed tumors of sweat glands, but all of them have been benign. Since malignant mixed tumors develop readily in salivary glands, I suppose it is inevitable that some day I should encounter one in the skin. I wish this was a little more convincing histologically but I suppose it is not possible to have everything. I have to say that if it is not a malignant mixed tumor, I am unable to suggest any other acceptable diagnosis for it.

ARTHUR PURDY STOUT, M.D.

Ref:

(Note: It seems rather interesting that these authors have only been able to collect 36 cases from all sources, while we have 36 cases on record in the Surgical Pathology Laboratory.)