TUMOR SEMINAR COLLECTION

SET XXVIII

Arthur Purdy Stout Club, May, 1950

Sec. 28

(3)

ARTHUR PURDY STOUT CLUB SEMINAR

May 19-20, 1950

St. Louis, Mo.

Case No.	Slide No.	Diagnosis
1	A-15337	Malakoplakia of urinary bladder.
2	A-16320 A-8441	Mixed (compound) lymphoblastoma plasma cell myeloma
3	P&S 31142	Malignant melanoma (?) of compound pigmented mole of sacral region. } both benign
4	P&S 32392	Compound pigmented mole of gluteal region (malignant?)
5	P&S 32165	Undiagnosed tumor (malignant giant cell tumor?) of hand
6	P&S 32302 32522	Reticulum cell sarcoma (?) of forearm Osteoid prod
7	P&S 32411	Osteogenic sarcoma of knee region (from sciatic nerve?) No malignant elements
8	P&S 32380	Benign mesothelioma of peritoneum ✓
9	P&S 27950	Malignant solitary fibrous mesothelioma of pleura ✓
10	P&S 32382	Mesothelioma (?) of mediastinum Thymoma
11	P&S 32381	Ganglioneuroma (undifferentiated) of mediastinum ✓
12	P&S 32435	Metastasizing basal cell epithelioma of eyelid ✓

CASE No. 1 S.P. No. A-15337

Arthur Purdy Stout Club
Seminar - 1950

DIAGNOSIS: Malakoplakia of urinary bladder.

MICROSCOPIC: The nodular thickenings in the bladder mucosa and submucosa are due to the presence of multiple rounded cells with markedly granular slight acidophilic cytoplasms immediately beneath the surface cells. These cells remind one of granular cell myoblastoma cells except for the presence in some of them of rounded concentrically layered intracytoplasmic inclusions. These vary somewhat; sometimes the center is clear, sometimes it is occupied by a dark dot but always there is a thick dark rim about the periphery. They have a positive Von Kossa reaction for calcium and many of them give a positive Prussian blue reaction for iron. The cytoplasm of some of the granular cells is finely vacuolated.

DISCUSSION: When I was shown a biopsy of this case and was told that it came from a patient showing multiple nodules in the bladder mucosa believed to be neoplastic, I thought it might be a granular cell myoblastoma although I could not understand the inclusion bodies and wondered if they could be any form of parasite. It was only later that I learned this was a rare form of bladder inflammation to which von Hausemann in 1903 had given the name malakoplakia. This word compounded from the Greek μαλακός = soft, and πλαξ = cake is descriptive of the gross appearance of the lesions. These are found most frequently in females and in the region of the trigone but may extend to the rest of the bladder, the ureters, and the pelvis of the kidney. They are usually yellowish brown. Most of the patients are over 40. The inclusion bodies are said to be peculiar to this condition and not found elsewhere. They are said frequently to give a positive reaction for inorganic iron. Sometimes the bodies are calcified. It is agreed that these bodies are not parasites. Loele has reported the successful formation of similar bodies by treating cultures of coliform bacilli with fresh urine and blood. Perhaps the majority of those who have speculated about them think they are probably derivatives from hemoglobin and a positive iron reaction in this case tends to support this. Many observers have suggested it represents a peculiar form of colon bacillus infection and others have suggested it is a form of tuberculosis or sarcoid. Actually the etiology remains undetermined. It has most frequently been a chance finding at autopsy.

Putschar, W., Malakoplakia, in Henke and Lubarsch, Handbuch der Speziellen Pathologischen Anatomie und Histologie, Berlin, J. Springer, 1934, vol. 6/2 pp 375-381.

Redevill, F.H., Malakoplakia of Urinary Bladder and Generalized Sarcoidosis. Striking Similarity of their Pathology, Etiology, Gross Appearance and Method of Treatment. J. Urol. 49: 401-407, 1943.

McDonald, S., and Sewell, W.T., Malakoplakia of the Bladder and Kidneys, J. Path. & Bact. 18: 306-318, 1913-1914.

Arthur Purdy Stout, M.D.

CASE #2

A-16320 (autopsy)
A-8441 (biopsy)

Arthur Purdy Stout Club
Seminar - 1950

DIAGNOSIS: Mixed (compound) lymphoblastoma, with areas of plasmocytoma-

MICROSCOPIC: The biopsy node from the neck shows incomplete preservation of the node architecture with preservation of sinuses but very few follicles. Most of the node has a granulomatous appearance with a good many vessels. When an attempt is made to evaluate the cells most of them appear of adult type with lymphocytes and reticulum cells predominating and with occasional plasma cells and eosinophilic leucocytes found. In places some of the cells look to me like reticuloblasts and there is considerable mitotic activity. I could find no Reed cells and no definite fibrosis. The node seemed to me very suspicious of some kind of malignant lymphoblastic activity but I was unable to feel certain of its nature or name.

The autopsy is astounding. In the ileum and duodenum are pure plasmocytomas. The one in the ileum is made up of ordinary plasma cells which one would interpret as neoplastic because they form a solid plaque which is non-granulomatous. The one in the duodenum is made up similarly of a solid mass of plasma cells but these are filled with Russell bodies! I have only seen one other comparable to this, - it was solitary in the external auditory canal. In the liver the nodule is made up almost entirely of small lymphoblasts and no plasma cells are found. The lymph nodes resemble somewhat the biopsy from the neck in that sinuses can still be recognized in places and the frame-work is markedly vascular, but no follicles remain. Probably most of the cells are blasts but they are of mixed types, small lymphoblasts, reticuloblasts, neoplastic plasma cells and occasional eosinophilic cells. I suspect there are also some myelocytes but I find it very difficult to recognize these cells. The spleen shows a diffuse hyperplasia of the same cell types but fewer of them seem to be blasts.

DISCUSSION: I am not an expert on lymphoblastic diseases therefore my opinions about this case are not worth very much, and I shall leave the chief discussion to our specialists in this field. For what it is worth, my interpretation of this remarkable case is a mixed neoplastic disturbance of the lymphoblastic and reticuloblastic systems with differing manifestations represented by mixed cellular infiltrations in lymph nodes and spleen, an almost pure lymphoblastic nodule in the liver and pure plasma cell tumors in the intestinal tract. Without a knowledge of the bone marrow changes and more definite information about the blood smears, it seems impossible to know whether or not there is also a leukemic element, but I would think that quite possible. In any event, it is the first time I have ever seen pure differentiated plasma cell tumors developing as part of a lymphoblastomatous process. I am sure I do not know what label should be used for the case, and I would welcome suggestions.

Arthur Purdy Stout, M.D.

CASE #3 P&S 31142

Arthur Purdy Stout Club
Seminar - 1950

Cellular blue nevus

DIAGNOSIS: Malignant melanoma (?) of compound pigmented mole of sacral region.

MICROSCOPIC: This mole has a complex aspect. The overlying epidermis is patchily pigmented and there are a few groups of mole cells in the papillary layer. In one place these are in contact with a rete peg but elsewhere they are not. Next below comes a thick layer of corium through which extend broad fibrous bands in which the reticulin fibers (Laidlaw impregnation) are delicate wiry and parallel in sharp contrast with the thick twisted collagen fibers of the normal corium through which they are passing. These zones are well supplied with bizarre stellate melanoblasts filled with melanin (Masson-Fontana). In this zone no ordinary cords of mole cells are seen. In the deepest part of the corium is the nodular sharply circumscribed tumor mass composed largely of spindle-shaped pale often vacuolated cells arranged in cords. There are practically no reticulin fibers among the cells but the cords are separated by fibrous septa. There are almost no mitoses among these cells but many of them contain fine granules of melanin and there are phagocytes in the septa also containing melanin. Among the larger pale tumor cells there are areas where the cells look rounded with occasional small multinucleate forms. These areas have the benign aspect of the ordinary pigmented naevus.

DISCUSSION: There are at least two interesting features in this case which provide material for discussion: (a) What kind of a mole is it and how did it develop, (b) Is it or is it not malignant? I have recently had an opportunity of reading the manuscript in French of a paper which has been prepared by Masson restating his ideas about the formation of moles. Briefly he conceives of practically all moles as being composed of two elements:- pigment forming melanoblasts from the epidermis which migrate downward into the corium and an upgrowth of Schwannian elements from the deeper part of the corium. Usually by the time one sees sections of moles these two elements have grown together and intermingled. Pigment formation is by the downgrowing melanoblasts. He does not know the actual derivation of the naevoid melanoblasts in the skin, whether they develop in the embryo in situ as a placode or whether during development they migrate there from the neural crest as in the case with amphibia and fishes. After the intermingling of the two elements variations may occur, one of which is the disappearance of the melanoblasts in the epidermis and the connections of the mole cells with it. His conception of the formation of pigmented moles has arisen from his study of moles in infants in which he has seen the epidermal proliferations separated from the more deeply placed Schwannian growths in the corium. In answer to a comment of mine he wrote me the following, which I have translated from the French:

> "'There are naevi,' you say, 'especially in young children in which all of the naevus cells are strongly pigmented? I have never seen such, which (be it well understood) does not mean that they don't exist. I would be very curious to see one of them. What I have seen in incipient moles in nurslings are always masses of melanoblasts still attached to the epidermis and its annexes or isolated in the dermis, all of them pigmented. But in all of these cases the deep nervous sprount was present, always without pigment. Sometimes this sprout was highly developed and diffuse as shown in my illustrations, sometimes it was more restricted (more recent, perhaps?) and limited to

disseminated multiplication foci of Schwannian nuclei of nerves and to a minimal invasion of the surrounding connective tissue by Schwannian cells. Such lesions might remain unperceived if one was not making a systematic search for them."

His manuscript does not deal with the formation of malignant tumors from moles although I have urged him to express an opinion about this in his paper because of the very great interest of the question. If this hypothesis of mole formation is correct, one would naturally suppose that malignant melanomas could develop from moles whether or not the mole cells were still in contact with the epidermis.

In the present case the superficial part of the mole is easily explained on the Masson basis by supposing that most of the connection with the epidermis has been lost. The deep tumor, however, is much more difficult to explain unless one is prepared to regard it as a frank malignant melanoma. I have hesitated about this because of the lack of mitoses and the bland aspects of the cells and their nuclei. The presence of this mass pushing down into the subcutaneous fat in my opinion is a strong argument in favor of malignancy. The presence of what appear to be foci of non-malignant mole cells among the larger spindle cells would seem to indicate an origin from these but I still feel an element of confusion because while most of the nerve twigs appear normal I have found one swollen by a proliferation of Schwann cells exactly resembling the spindle cells of the tumor.

One thing seems evident, however. Here is a tumor apparently malignant which has arisen from the deepest part of a mole which those who like the term would have difficulty in labelling a "junction naevus".

Arthur Purdy Stout, M.D.

CASE #4 P&S 32392

Arthur Purdy Stout Club
Seminar - 1950

Cellular blue nevus -

DIAGNOSIS: Compound pigmented mole of gluteal region (malignant?)

MICROSCOPIC: This is a tumor of melanoblasts which does not touch the epidermis but is separated from it in all parts of the section by a thin layer of corium. The superficial part of the tumor is quite fibrous and the cells containing melanin are for the most part long slender straps, spindles or stellate forms. There is a good deal of connective tissue accompanying them. In this area, however, there are occasional foci where the cells are rounded and in small groups. In the deepest portion a new element appears; cords of cells which are pale elongated vacuolated and tending to form a syncytium. Most of them are without pigment so that they stand out in sharp contrast to the surrounding heavily pigmented tissue. However, even a few of these contain some fine granules of melanin. Although these structures seem like swollen twisted nerves with proliferated Schwann cells, it is questionable whether or not they are such; in some cases there does not appear to be any perineurial sheath and the cells seem to have continuity with the surrounding mole cells.

DISCUSSION: It is interesting to try to interpret this tumor in the light of what has been said in connection with P&S 31142 (Case #3). If this tumor originated in the epidermis there is no trace of that connection in the section which I have examined. I presume, therefore, it has disappeared. In this tumor there is certainly heavy pigmentation throughout. As in the former case, the tumor bulges down into the subcutaneous layer, a feature which should make one suspicious of malignancy. Perhaps the most difficult elements to interpret are the cords of cells in the deepest part which may either be Schwannian proliferations or melanoblastic cells. If the latter it must also be decided whether or not they represent a malignant manifestation. I would like to think of them as Schwann cells proliferated inside of a nerve sheath and perhaps they are but I am afraid this may be a false interpretation because of the fact that some of them contain granules of melanin and especially because there is continuity between some of them and the surrounding melanoblasts. Supposing then that these are all mole cells, are they benign or malignant? This question I feel unable to answer categorically; I can only say they may be. There is no evidence from mitosis or nuclear anaplasia that the tumor is malignant, but certainly I would not dare disregard this possibility.

Arthur Purdy Stout, M.D.

Seminar 1950, Case #4 - Compound pigmented mole of gluteal region (malignant?)

Patient disappeared from area. Last employer (3 years ago) has no information.

CASE #5 P&S 32165

Arthur Purdy Stout Club
Seminar - 1950

Alveolar rhabdomyosarcoma

DIAGNOSIS: Undiagnosed tumor (malignant giant cell tumor ?) of hand.

MICROSCOPIC: This tumor is composed of cords of polygonal cells with almost no fibers among them, although rather slender fibrovascular septa separate them. The cells are very loosely arranged except for the most external layer of cells in each cord which are firmly attached to the fibrous septa. The rest of the cells are extremely varied but many of them have cytoplasmic prolongations of variable thickness which are sometimes quite long and branched. Rarely a rounded giant cell is found among them with several nuclei. Exactly the same morphology is found in the primary growth and in lymph node metastases. A peculiar feature seen especially in the metastatic cells but very rarely in the primary tumor is the presence of blobs of fuchsinophilic material in the tumor cell cytoplasm. Apparently the reason the cells at the periphery of the cords cling to the septa comes from the extension of cytoplasmic processes for a short distance into the fibrous septa somewhat in the fashion of the myoepithelial tails of apocrine sweat gland cells. At its periphery the tumor has infiltrated between the fibers of striated muscle.

DISCUSSION: I confess I cannot recall having seen a tumor exactly like this before and can only speculate about its nature. Since the tumor has arisen in the hand, possibly in some relationship with tendons or tendon sheaths, one must speculate about the possibility of synovial sarcoma. I can only say that the absence of a fibrosarcoma like stroma between the tumor cells has not been a feature of any of these tumors which I have recognized. I would not exclude that as a possibility, however, since I have seen what was reputed to be an extension from a tumor originally diagnosed by Tracy Mallory as a synovial sarcoma with the original diagnosis later confirmed by Fred Stewart, that had no resemblance to the customary morphology of synovial sarcoma. Therefore I retain this diagnosis as a possibility. Can this be a malignant form of giant cell tumor of tendon sheath? Again I do not know. Apparently it is possible for a giant cell tumor to become malignant and still retain some of its original characteristics. Here we have occasional giant cells but whether or not the majority of the tumor cells can be malignant histiocytes I cannot say. I recognize the occasional occurrence of a malignant soft tissue reticulum cell sarcoma not originating in lymphoid tissues but they have looked like ordinary reticulum cell neoplasms, which this does not. Again I retain an open mind about this. I do not believe one can seriously consider an origin from sweat gland epithelium nor that the tumor is a rhabdomyoblastoma. They must be considered as possibilities since I do not know what the tumor is. I think I am willing to exclude a vascular origin for this tumor. The arrangement is somewhat reminiscent of Fred Stewart's malignant lymphangiosarcomas but these spaces and the cells in them surely are not lymphatics and endotheloblasts.

Concerning this case I can only say that I have still a great deal to learn about soft tissue tumors. I hope some member of the audience will give me the answer and convince me he is right; of all the suggestions I have made, the one which appeals to me most at the moment is malignant giant cell tumor, meaning by that a form of reticulum cell sarcoma.

Arthur Purdy Stout, M.D.

Case #6
A. P. Stout Club Seminar of 1950

Follow-up on a 28 year old male, P&S #32302, in which the diagnosis was open to question. Reticulum cell sarcoma was considered by Dr. Stout; undiagnosed tumor as best diagnosis. This patient eventually succumbed to pulmonary metastasis. No autopsy.

P&S 32302
32522

CASE #6

Arthur Purdy Stout Club
Seminar - 1950

? synovial sarcoma

DIAGNOSIS: Reticulum cell sarcoma (?) of forearm.

MICROSCOPIC: This tumor is extremely complex and confusing. It seems to be made up of cords of rather large rounded or polygonal cells without reticulin fibers among them, enclosed within dense collagenous septa. These sometimes bear capillaries and in places the capillary proliferation has become paramount and the large tumor cells disappear from the picture. But with a Laidlaw impregnation the vessels of this tumor seem largely incidental and where they have proliferated this seems to be largely the result of trauma and organization of blood clot rather than part of the neoplasm. It seems necessary therefore to concentrate on the appearance of the tumor cells and disregard the fibrosis and vascular proliferations which are secondary and incidental. The tumor cells when well preserved tend to be rounded with large nuclei and rather scanty granular cytoplasm. They show no secretional activity which I have recognized. In most places they are not well preserved and crowded together. Instead, they are separated and have cytoplasmic processes which tend to form a reticulum or at least give that effect. The nodule subsequently removed (P&S 32522) seems to me to be only a foreign body reaction to catgut.

DISCUSSION: In the places where an apparent reticulum is formed one is struck by the resemblance to the reticulum seen in lymph sinuses. After having rejected the idea this could be a vascular tumor of any kind or a mixed mesodermal tumor, I have finally come to the opinion that it can best be explained as a reticulum or histiocytic cell tumor of the soft tissues. It is perhaps unusual to see such tumors with a great deal of fibrosis and without formation of any reticulin fibers by the tumor cells, nevertheless if it is not that I can think of no other way of explaining it. In this connection it is most interesting to compare this tumor with Lauren Ackerman's tumor of the hand (P&S 32165) which also possibly may be a similar sort of growth arising in connection with a tendon or tendon sheath. We know too little about such growths but I think these two neoplasms tend to help us to understand them. It may be that the so-called malignant giant cell tumors of bone marrow, if it exists, might belong to the same category. I used to think that all of the malignant giant cell tumors of bone marrow were probably osteolytic osteogenic sarcomas masquerading as giant cell tumors but in the last two or three years I have seen one or two cases which have caused me to suspect there may be something in the idea that some are different. Since giant cell tumors are largely phagocytic reticulum cells, it is possible to accept the conception that some reticumum cell sarcomas of bone marrow might be of this type. The only trouble there and in regard to this tumor is the fact that the ordinary reticumum cell tumors are superficially, at least, different in appearance. But the cells of the reticulo-endothelial system are quite versatile and I suppose one should not be too surprised if they display variability in their neoplastic manifestations.

Arthur Purdy Stout, M.D.

CASE #7 P&S 32411

Arthur Purdy Stout Club
Seminar - 1950

? Malignant schwannoma

DIAGNOSIS: Osteogenic sarcoma of knee region (from sciatic nerve?)

MICROSCOPIC: This is a neoplasm composed largely of spindle shaped cells and delicate reticulin fibers with a marked variation in their appearance and arrangement in various parts of the growth. The Laidlaw impregnation shows that in some places the fibers surround every cell as in a fibrosarcoma, in some places they are straight and wiry as in a leiomyosarcoma or Schwann cell tumor, and in still others they are scanty and only surround small groups of cells. The silver also indicates there is no basic vascular pattern, all that one can say is that some areas are more vascular than others. A few areas are myxomatous with stellate cells and occasionally in the more cellular areas, the tumor forms atypical osteoid. In no area can I recognize any proliferations which I could recognize as Schwannian.

DISCUSSION: The discussion is handicapped by the fact that we do not have available any sections through the fusiform enlargement of the sciatic nerve and so cannot tell whether or not it contains tumor. If it does so then the possibility of an origin from the nerve sheath tissues must be seriously considered. The tumor growth above described does not look like a Schwannian tumor so that if it comes from the nerve sheath either it comes from its mesodermal elements or in its growth it has assumed the attributes of a mesodermal tumor. The rather variable appearance of the growth reminds me somewhat of tumors of bone marrow which have been labelled fibrosarcomas. They retain this name if no evidence of atypical osteoid formation is detected but if it is they are then labelled osteogenic sarcoma. I have always been suspicious of these so called and still am - they are just as malignant as osteogenic sarcomas and I suspect that the fibrosarcoma is only a masque hiding the fact that the tumor cells really are osteoblasts. In this case there are present a number of foci of atypical osteoid formation which permit me to label the tumor an osteogenic sarcoma. There is of course the possibility that the osteoid is metaplasia but in my experience, fibrosarcomas do not exhibit the varied aspects of growth seen in this tumor and I prefer to classify it as basically an osteoblastic tumor. If it comes from the nerve sheath tissues it is the first time I have ever seen such a tumor as this arise from within a nerve sheath.

Arthur Purdy Stout, M.D.

CASE #8 P&S 32380

Arthur Purdy Stout Club
Seminar - 1950

DIAGNOSIS: Benign mesothelioma of peritoneum, uterus (adenomatoid tumor)

MICROSCOPIC: This tumor is characteristic of the benign mesotheliomas of the genital tract. It has formed the gland-like tubes lined by cells resembling the mesothelium of the peritoneum when it is irritated and the lumens contain a mucicarminophilic material. The smooth muscle of the "nodule" resembles myometrial muscle with very little additional fibrous tissue.

DISCUSSION: Whatever name is the proper one for these growths we all recognize them and at least in this gathering I hope that no one still thinks they are lymphangiomas. The chief interest of this case lies in the fact that the tubules have extended quite deeply into the muscle, far deeper than I have before observed. Nevertheless, in this instance I would in no way suggest that because of this, the growth should be considered malignant. It is interesting to speculate whether the smooth muscle of this nodule was a pre-existing fibroid invaded by the growth, or ordinary myometrium invaded by the growth and so converted into a palpable nodule, or whether the invasion of the tubules downward was associated with a proliferation of smooth muscle. I do not know how to answer that question except to say that benign mesotheliomas of the epididymis are sometimes associated with a proliferation of smooth muscle which seems to be part of the growth. I shall elaborate further upon primary tumors of the mesothelium a little later in connection with another case.

Arthur Purdy Stout, M.D.

CASE #9 P&S 27950

Arthur Purdy Stout Club
Seminar - 1950

DIAGNOSIS: Malignant solitary fibrous mesothelioma of pleura.

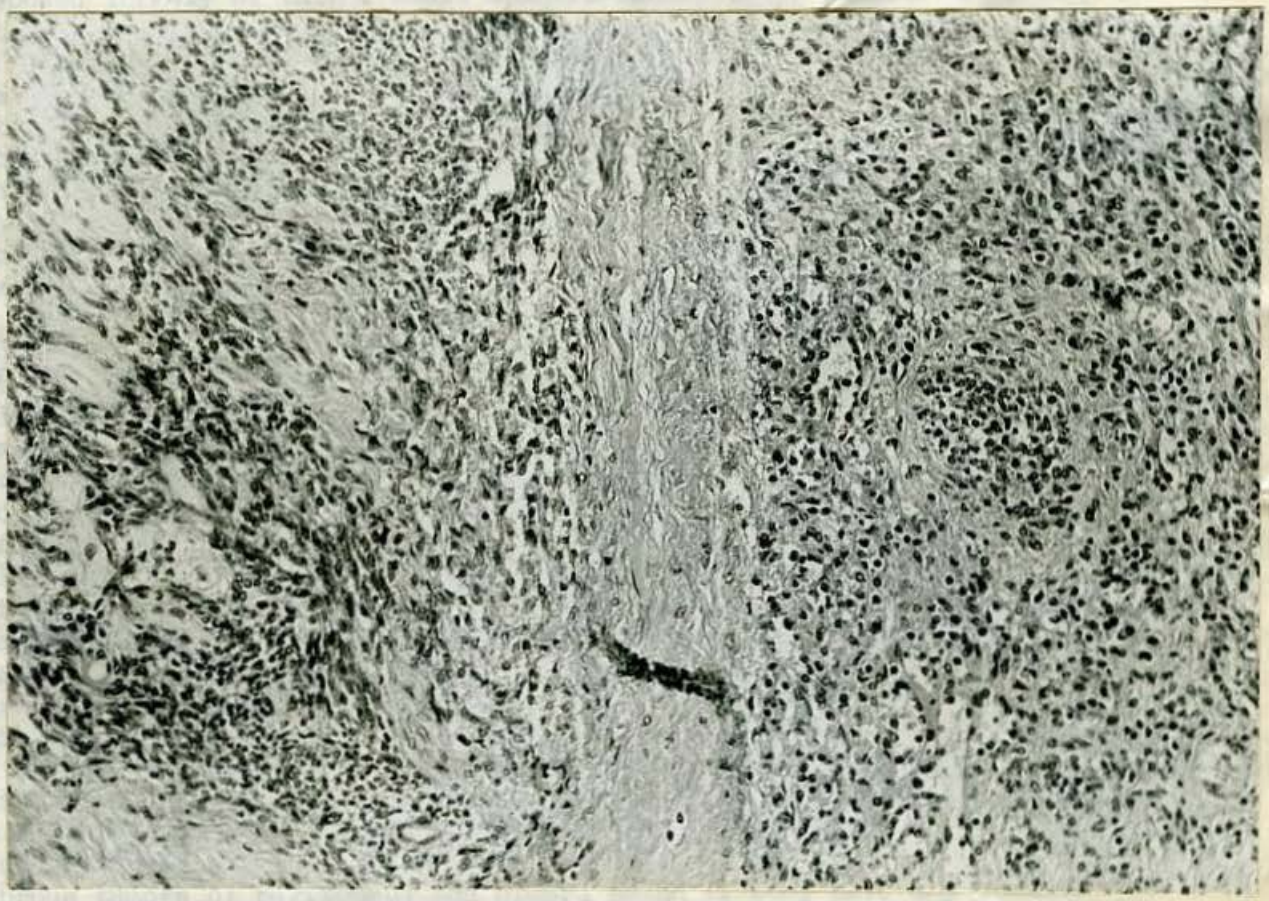
MICROSCOPIC: The sections shown represent the recurrence of this tumor in the lung. It has not changed its appearance from that exhibited by the primary growth. The tumor is composed of spindle-shaped cells and reticulin fibers. The fibers are generally delicate and variable in that they accompany and even surround some cells while in other places they are absent. The cells also vary; in some places they are frankly anaplastic with many mitoses, elsewhere they are more slender and appear less like malignant cells. No intracellular fibers are detected. The original tumor in one section showed a rather striking palisading of nuclei in one area - this has not been seen again elsewhere. To sum up the tumor's characteristics, one may say that it is a spindle cell anaplastic neoplasm which in places forms reticulin fibers and the chief feature of which is a tendency to grow without any recognizable pattern.

DISCUSSION: This tumor is one of a group of 16 solitary pleural neoplasms recorded in the Laboratory of Surgical Pathology of Columbia University which I believe are derived from pleural mesothelial cells. They naturally fall into two groups, benign and malignant. The benign tumors project into the pleural space from the parietal or visceral pleura or into an interlobar fissure. They are often pedunculated. They have the same patternless structure exhibited by this tumor with a much greater fibrous element and no cellular anaplasia. They cause no symptoms and sometimes reach a giant size before their chance discovery. Simple excision cures them. The malignant tumors have a broad pleural attachment but are buried in lung or chest wall. Those in the lung cause pain and sometimes cough or hemoptysis. Histologically they look like this tumor and are almost always fatal, generally however because of local recurrence, since distant metastases are few. Since Margaret Murray demonstrated the mesothelial nature of the first tumor of this sort to come to my attention, I have been on the lookout for them and the accumulation of 16 cases has enabled me to recognize the tumor when I met it. This tumor was called either a leiomyosarcoma or a neurogenic sarcoma by the experts at the A.F.I.P. This does not surprise me for in the literature I have found the following names applied to similar neoplasms: fibroma, fibrosarcoma, fibrosarcoma myxomatodes, myxosarcoma, leiomyosarcoma, sarcoma, sarcoma-like tumor, giant sarcoma of the pleura, endothelioma and endothelial sarcoma. Whether or not they are mesotheliomas, I think it is important to recognize that all of the above names have been applied to the same tumor type and unless we can agree on a single name and use it for all of these tumors, we are going to make no progress at all in learning about them.

One thing disturbed me about this solitary fibrous mesothelioma until very recently. There are other mesothelial surfaces, - why should I be able to collect 16 from the pleura and none from the others? But in going over our retroperitoneal and peritoneal neoplasms to find good illustrative cases for Lauren Ackerman's fascicle on tumors of those tissues, I discovered we had an exactly similar benign tumor springing from the peritoneum hidden in our files under the erroneous label of leiomyosarcoma. Since these tumors are unlike any found elsewhere and I now know that both pleura and peritoneum can produce them, I am encouraged to persist in calling them solitary fibrous mesotheliomas.

I must say that the variety of neoplasms to which the name mesothelioma is applied is bizarre and varied. We now have the standard diffuse spreading mesotheliomas with which all are familiar and which are accepted by everyone with the possible exception of Willis. I do not know whether or not he became converted on his American trip. We have next the so-called benign mesotheliomas of the genital zone, of which Case #8 (P&S 32380) is an example. These were so named by Masson and later by N. Evans independently. I believe they are of mesothelial origin but apparently very few others agree. I cannot understand why they should be restricted to the genital zone and I shall not rest easy until I find one elsewhere. These, by the way, while usually benign, can also be malignant. And finally, there are the solitary fibrous tumors of which this case is an example. - Probably nobody accepts these yet as mesotheliomas but I shall try to sell the idea. Certainly a strange group to be derived from a single cell form.

Arthur Purdy Stout, M.D.



P&S 27950

Photomicrograph of metastasis to spleen (X210)

CASE #10 P&S 32382

Arthur Purdy Stout Club
Seminar - 1950 Thymoma

DIAGNOSIS: Mesothelioma (?) of mediastinum.

MICROSCOPIC: The salient features of this tumor are as follows: It is composed largely of rather small spindle-shaped cells packed in closely together with only a few reticulin fibers between some of them, and without definite arrangement. The nuclei do not have large nucleoli, do not appear anaplastic and mitoses are very hard to find. Blood vessels are uncommon. Intermingled with the spindle cells in some areas are tiny rounded areas containing a little fibrillated or granular material which sometimes stains pink or red with mucicarmine. The grossly visible cysts seem to be enlargements of these tiny areas. All are lined by cells which seem to be modifications of the basic tumor cell. The fibrous areas do not seem to me to be an essential part of the tumor.

DISCUSSION: It would be easier to discuss this tumor if we knew a little more about its exact situation and attachments. In the anterior mediastinum it is always necessary to ask oneself whether or not the growth comes from the thymus. Thymic tumors are almost always compounded of the two basic cellular elements composing that organ. This seems to be a unicellular growth and moreover it forms rosettes containing mucicarminophilic material, a feature not shown by any thymic tumors with which I am acquainted. The only reasonable explanation which occurs to me is to suppose that this is a tumor derived from mesothelial cells of pleura or pericardium or failing that, from congenitally displaced mesothelial cells. The tendency to form rosettes containing mucicarminophilic material is quite in keeping with the potentialities of the mesothelial cells and the fact that they also have a spindle shape and apparently are capable of forming some reticulin fibers is also consistent. But I am disturbed by this tumor because it does not fit in well with the characteristics of the mesotheliomas which are familiar to me. Certainly it is not a diffuse spreading and malignant mesothelioma covering pleural or pericardial surface. Nor is it like the solitary fibrous tumors of peritoneum and pleura which if they have any tubular formations at all show them only near the serous covering and with lining cells resembling normal swollen mesothelia. If this is a mesothelioma it is displaying characteristics which I have not seen in any other tumors so called by me. Yet if it is not, what else can it be? Tentatively I am forced to classify it so. From the clinical story, I judge it is a benign example.

Arthur Purdy Stout, M.D.

CASE #11 P&S 32381

Arthur Purdy Stout Club
Seminar - 1950

DIAGNOSIS: Ganglioneuroma (undifferentiated) of mediastinum.

MICROSCOPIC: This tumor is composed largely of small rounded undifferentiated cells placed closely together without any definite tendency to form rosettes or pseudorosettes and embedded in a finely fibrillated matrix resembling glia. This matrix stains a brownish rose with Masson's trichrome which reveals no blue fibers except around the blood vessels in the vascular framework. At intervals there are foci where the glia-like fibrils are greatly increased in number and the cells are fewer and more widely separated. Moreover, these cells are different in appearance, they are larger, occasionally multinucleated, the nuclei are more vesicular instead of being very dark and the cytoplasm is more voluminous and sometimes shows polar prolongations. No adult ganglion cells, satellite or Schwannian cells are recognized.

DISCUSSION: This tumor is a neuroblastic growth which many would call a sympathicoblastoma or neuroblastoma. I believe it deserves to be designated by some qualifying adjective because there are foci of partial differentiation in it. No adult fully differentiated ganglion cells seem to be present but there are foci where differentiation is at least partial. Such partly differentiated tumors are not always fatal which is almost invariably the case with undifferentiated sympathicoblastomas in infants and I suspect that the reported cures of neuroblastomas in children probably belong to this group. I suspect also that the report of a metastasizing ganglioneuroma (which has been mentioned by Karsner) is either one of these tumors or else a neoplasm in which part of the growth consisted of fully differentiated ganglioneuroma in one part and an undifferentiated sympathicoblastoma in another part of the same tumor or in a separate tumor in the same individual. It is hard for me to believe that a tumor with the characteristics of a fully differentiated ganglioneuroma could metastasize.

In regard to these partly differentiated tumors, it has been my experience that the degrees of differentiation can vary. For instance, in the present tumor the evidence of differentiation is slight but in some others which we have on file it is much more advanced. I presume that the degree of malignancy probably varies with the degree of differentiation, but we have too few tumors of this sort from which to judge. With regard to the name, I think they can be called either partly differentiated sympathicoblastomas or partly undifferentiated ganglioneuromas. I used the latter diagnosis for the first case of this sort I ever encountered, a young girl with a tumor of a cervical sympathetic ganglion who was cured six years after excision and have stuck to it ever since, but I am not wedded to either term.

Arthur Purdy Stout, M.D.

CASE #12 P&S 32435

Arthur Purdy Stout Club
Seminar - 1950

DIAGNOSIS: Metastasizing basal cell epithelioma of eyelid.

MICROSCOPIC: The sections show the extension of the eyelid tumor into the conjunctival mucosa of the lid and the metastasis in the parotid area. Both of them to me show all the characteristics of basal cell epithelioma. The thin remnants of lymphoid tissue around the margins of the tumor tissue in the parotid area are sufficient to satisfy me that they represent remnants of the parotid lymph node.

DISCUSSION: This case is present to determine whether or not it is acceptable as an example of metastasis from a basal cell epithelioma. As far as I am concerned I can see no reason for doubting the authenticity of the case. The tumor seems to be a straightforward basal cell growth of the rodent ulcer type and the metastasis a genuine metastasis and not a direct extension. I tried to see if by chance it could be considered a sebaceous carcinoma, a tumor somewhat more prone to metastasize than the straight basal cell variety but in these sections I can see no reason for suggesting it.

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