Acta Medica Iranica
1961 Vol. IV, 46 - 51

A CASE OF PERITONEAL MESOTHELIOMA

Modjteba Sajadi, M.D. ⁎ & Manoutchehr Setayeshgar, M.D. ⁎⁎
Department of Pathology, Tehran Universitiy, School of Medicine

The mesothelioma is a primary tumor of the serosa (pericardum, pleura and periotneum). It is a rare tumor. Some pathologists, like Willis (1938), deny its existence and think that what is called mesothelioma is actually a metastasis of some undiscovered malignant tumor of the body (especially of the lungs).

But most of the pathologists are in accord with Stout & Murray (1942) and believe that such a tumor exists and its presence could be proven by culturing the tumor tissue.

So far as we know no cases of mesothelioma is reported from Iran and we hope that the reporting of the following case would be of some interest.

CASE HISTORY:

A 30 year old man was admitted, with complaints of pain and swelling of the abdomen. The pain was diffuse and started two months prior to the admission. It was not releved by meals or alkalin drugs. He had no appetite. There was no remarkable points in the past history of the case, and his family. The clinical examination revealed a tall, emaciated young man with protruded abdomen, complaining of diffuse abdominal pain. His weight was 52 kgm. His blood pressure was 10/7. He had no jaundice. The temperature was normal. On abdominal palpation a tumor mass was found and there was ascites. On puncture 1500 cc. of clear, yellow green fluid was obtained from abdominal cavity. No malignant cells were reported on examination of this fluid. No enlarged lymph nodes were found on the neck, axillae and groins.

⁎ Professor of Pathology, Tehran University School of Medicine, Tehran, Iran.
⁎⁎ Research Assistant in Pathology.

The other organs showed no abnormalities. The laboratory data were reported as follows:

R.B.C. : 3,400,000/mm³ - W.B.C. 7500/mm³ - The formula was within normal range. Blood urea: 0,40 gm/lit. Total bilirubin, 6 mg/lit. hemoglogin 120 gm./lit. Total protein: 50 gm./lit. Sedimentation rate 65 mm. in the first hour and 105 mm. in the second hour.

Results of liver function tests were within normal limits. In the hospital he received non-specific therapy. He kept loosing weight, and he was 42 kgm. two days before his death, which occurred on his 48th day of hospitalization.

AUTOPSY REPORT:

The body was that of well developed, poorly nourished young man. His abdomen was protruded. No jaundice or large lymph-nodes were present. On opening there was about 200 cc. clear yellowish-green fluid in the abdomen. The omentum was thick, firm and greyish white incolour. Its thickness in some places was 2,5 cm. (fig. 1).

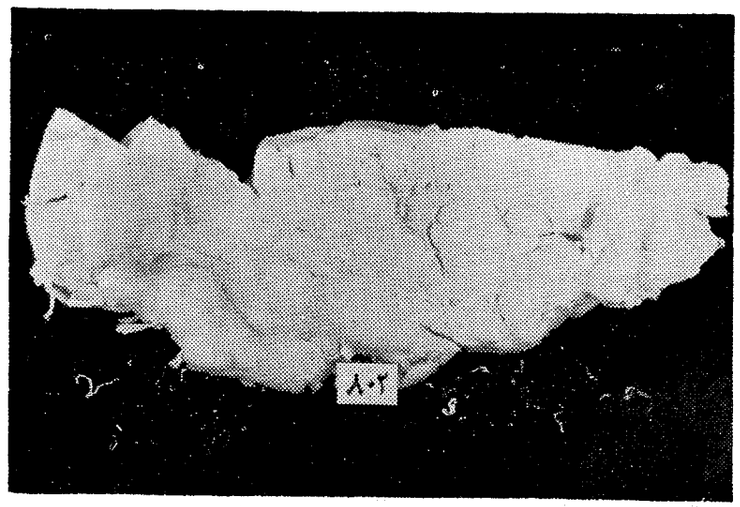

Fig. (1) The Omentum is thick and firm.

The different segments of the intestine were matted together. On section, the covering serosa of the intestinal wall was thick and greyish white (fig. 2.) The limit between muscular layer and thickened serosa was sharp.

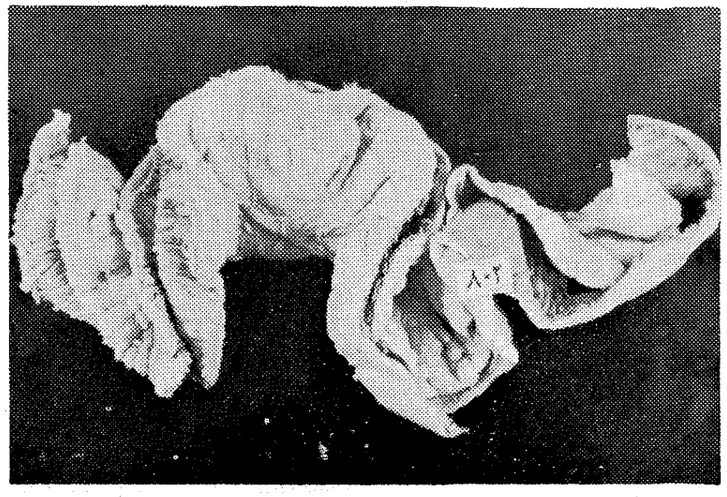

Fig. (2) The intestinal wall is thick and covered by thickend serosa.

The liver and spleen were of normal sizes and covered partly by thickened greyish white peritoneum.

No abnormalities were found in other organs, except for mild adhesion in the right pleura.

Microscopic examination of tissues removed from omentum,

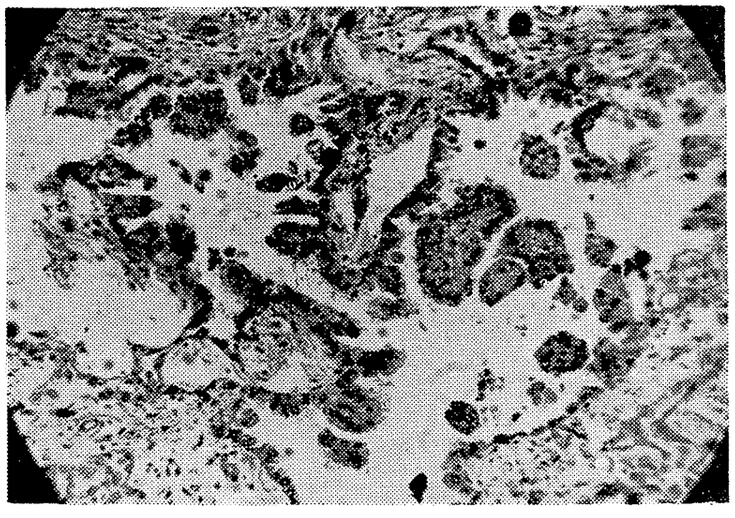

Fig. (3) The section is taken from peritoneum, it shows a papillary tumor.

revealed the presence of a papillary tumor (fig. 3). The papillae were formed by loose connective tissue covered by one layer of cuboidal cells (fig. 4). These latter had eosinophilic cytoplasm and round hypochromatic nuclei. No mitosis were present. The peritoneal covering of abdominal organs had the same tumoral aspect as described above. There was no invasion of the underlying tissue.

The numerous sections of other organs revealed no tumor. The abdominal lymph-nodes, which were large on gross examination, showed no tumor in histological examination. The enlargement was due to the thickened peritoneal covering.

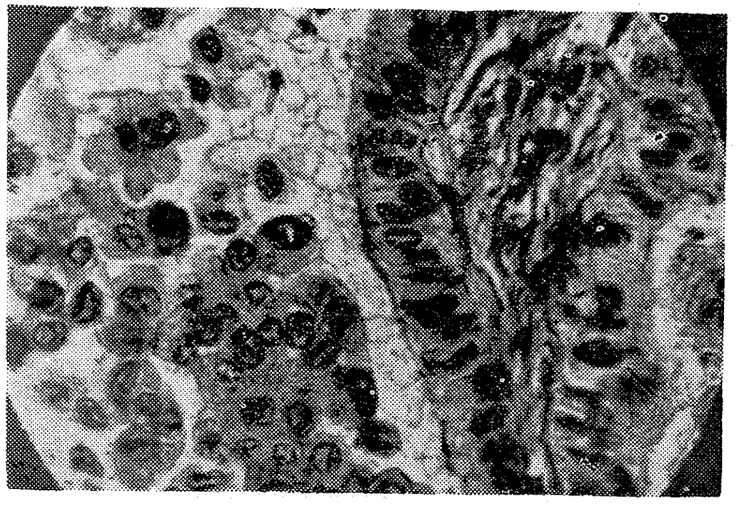

Fig. (4) The papillae are formed by loose connective tissue covered by one layer of cuboidal cells.

DISCUSSION:

The origin of mesothelioma is the mesenchymal tissue and like this latter the cells are apt to change towards fibroblastic elements or towards epithelial cells. So we expect to get two histological forms of mesothelioma: epithelial and fibrous mesothelioma.

The existence of fibrous form of mesothelioma was not accepted without dispute. Brown and Johnson (1951) hold that fibrous form of mesothelioma, are in reality an inflammatory residue of previous pleuritis.

In 1939 a 43 year old woman was operated for the presence of a large tumor mass on pleura. The report of histology of tumor by Stout was fibro-sarcoma of pleura. Stout and Murray (1942) by culturing a part of this tumor, proved that this fibro-sarcoma is originated from mesothelial cells. But this idea was not accepted by all pathologists who examined the specimens.

In 1953 Stout reported 165 cases of fibrous mesothelioma from U.S.A., Italy and Mexico.

In 1957 Godwin reported 14 other cases and by now the existence of fibrous mesothelioma is accepted by nearly all pathologists.

The presence of epithelial form of mesothelioma was accepted more easily by all pathologists with the exception of Willis (1938) who still thinks that most of these tumors, taken for mesothelioma, are metastases from some unknown foci (mostly lungs). However, the most painstaking autopsies performed on some cases of mesothelioma failed to disclose any primary tumor in other organs.

The mesothelioma is divided by Ackerman (1953) into benign and malignant forms; each of these are subdivided as follows:

Benign form:	Fibrous (localized-diffuse) Papillary (" ")
Malignant form:	Fibrous (localized diffuse) Papillary (" ")
Tubular	(Resembling synovial sarcoma. localized-diffuse).

The fibrous type is mostly found in the pleura and the papillary type is a common form of peritoneal mesothelioma.

From the clinical point of view, the benign form can be asymptomatic for a long time. Keasbey * while operating on a 27 year old woman, found a peritoneal tumor which was diagnosed as benign papillary mesothelioma by the pathologists. The tumor was not removed and the patient had no complaint until eleven years later.

On the contrary the malignant form is metastasized through the lymph or blood currents.

* Unpublished data.

In our case the tumor was a papillary form of mesothelioma of peritoneum. We could not find any other tumor in the body. On microscopic examination the tumor was not invasive. No mitosis or malignant changes were noted, but clinically the disease had progressed rapidly, causing the fatient's demise with in a short time.

Summary and Conclusion:

A case of papillary mesothelioma peritoneum in a 30 year old man is reported and the question of mesothelioma discussed.

Sommaire

Description d'un cas de mesotheliome papillaire peritoneale chez un homme de 30 ans et discussion de la question des mesotheliomes en general.

References

1 - **ACKERMAN, L.V. 1954:** Tumors of the Retroperitoneum, Mesentery and Peritoneum; Atlas of Tumor Pathology, sect. 6 fasc. 23 and 24 Washington, D.C. Armed Forces Institute of Pathology P. 100.

2 - **BROWN**, W.G., AND **JOHNSON. L.C. 1951:** Tumors of the pleura Mill Surgeon 105.

... 3 - **GODWIN, M.C. 1957:** Diffuse mesotheliomas; with comment on their relation to localized fibrous mesotheliomas. Cancer 10: 298.

4 - STOUT, A.P., AND **MURRAY, M.R. 1942:** Localized pleural mesothelioma; investigation of its characteristics and histogenesis by method of tissue culture. Arch. Path. 34, 951.

... 5 - **WILLIS, R.A., 1938:** Metastatic deposit of bronchial carcinoma in hydrocele misdiagnosed "endothelioma," with review of supposed "endotheliomas" of serous membranes. J. Path. Bact. 47: 35.