Mesonephroid Tumor of the Ovary

Report of a Case

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SYNOPSIS

A case of mesonephroid tumor of the ovary coexisted with tuberculosis in a 25-year-old female was presented. Authors have reviewed the literatures as to its histogenesis, terminology and have advocated the term "Mesonephroid tumor" to this ovarian neoplasma. The differential diagnosis has been done, with the result that this has formed a distinct entity.

INTRODUCTION

The term "Mesonephroma ovarii" was originally introduced by Schiller in 1939 to designate one group of ovarian tumors for which he supported the theory of mesonephric origin.[1)]

Since then many reports have appeared together with discussing as to its histogenesis and terminology.[2)~16)]

But there still now have been confusion and controversy over them. One case of this type has recently come to our observation.

REPORT OF A CASE

CASE HISTORY

The patient, 25-year-old female, noticed the lower abdominal mass on the third month after full term normal delivery.

Her past medical and familial histories revealed no significant information. There was no evidence of change in secondary sex characteristics. She was taken to exploratory laparatomy under the suspicion of uterine myoma.

The tumor was found to be easily bleeding and firmly adherent to the small intestine and the great omentum, for this reason, surgical excision of it couldn't be perfomed.

Under strong suspicion of ovarian cancer, she was treated with anticancerous drugs (Endoxan and 5-FU) with benefit ensued.

Two months later after exploratory laparatomy, the tumor was removed as part of a total hysterectomy with bilateral salpingo-oophorectomy. There was no evidence of metastasis.

Postoperative anticancerous drug therapy (Endoxan) was given without X-ray one. When last seen about 5 months later, the patient was in good health and there was no evidence of recurrence.

GROSS APPEARANCE

The tumor was the size of a child's head. The tumor had a multinodular surface, some parts of which were extremely vascular. The cut surface of it revealed grayish white, hemorrhagic and gelatinous nodules.

MICROSCOPIC APPEARANCE

The specimens were fixed in Carnoy's solution. Sections were observed with H. & E., PAS with and without salivary digestion, Best's carmine, mucicarmice and Alcian blue staining.

The histological pattern of the tumor was tubular and cystic structures lined by clear cells which were often of hob-nail configuration (Fig. 1).

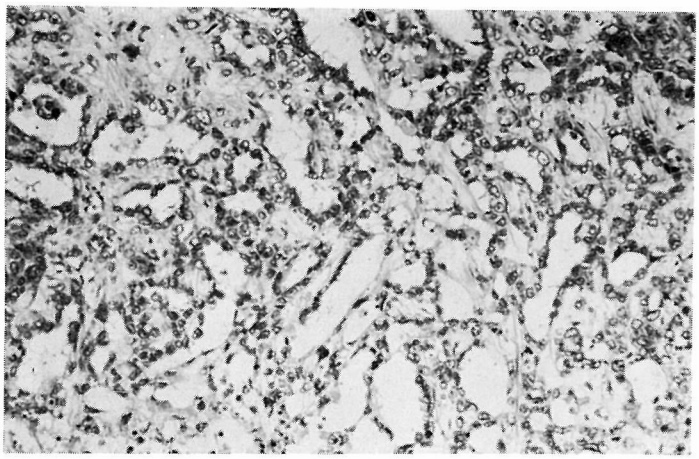

Fig. 1: tubular and cystic structures lined by "hob-nail" cells (H. & E.)

In some areas, the cells lining the tubules or cysts had tuftlike elevations into their lumens. These figures seemed as glomerulus-like appearance and these tubular or cystic structures surrounding the tuftlike elevations were likened to Bowman's capsule (Fig. 2).

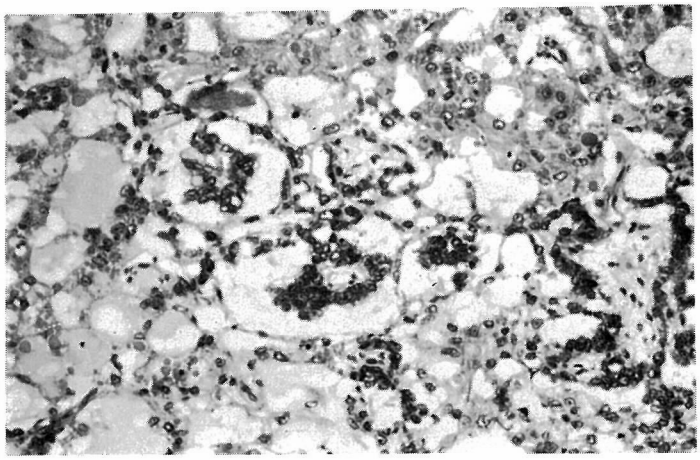

Fig. 2: glomerulus-like structures. H. & E.)

With high magnification, the tuftlike elevations consisted of perivascular formations with mantles of cells (Fig. 3). Some areas contained angioendotheliomatous features or solid portions (Fig. 4).

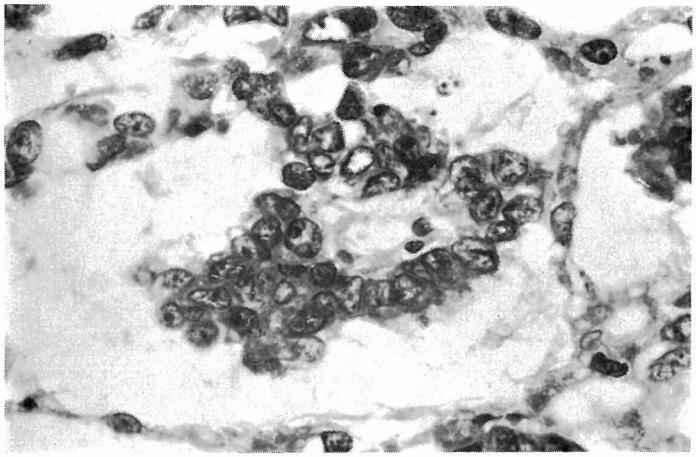

Fig. 3: high magnification of Fig. 2. (H. & E.)

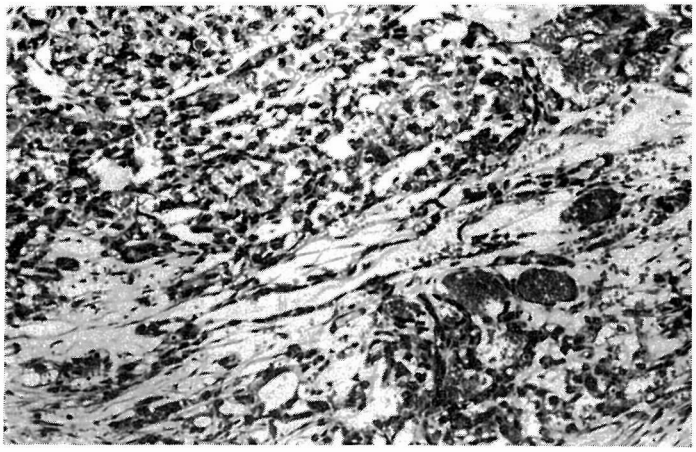

Fig. 4: angioendotheliomatous feature (H. & E.)

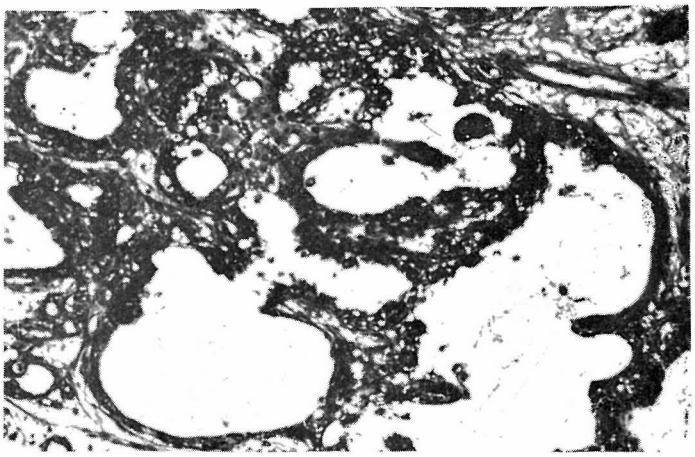

Fig. 5: the undigested PAS positive material in the cytoplasma

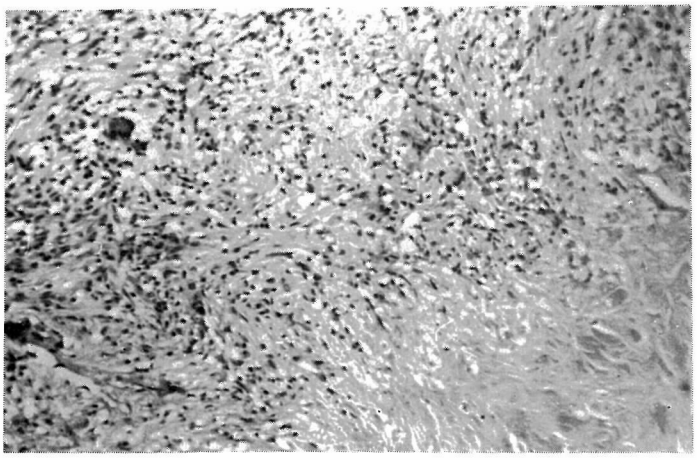

Fig. 6: tuberculosis (H. & E.)

The PAS stain was positive in the cytoplasma of these cells, but digestible with saliva, as well as in the luminal secretions (Fig. 5). Best's carmine was also positive. Mucicarmine and Alciane blue were faintly positive in the luminal secretions.

The connective tissue of stroma was loose and edematous in one area, or densely collagenous in the other area.

Tuberculous focus was observed by accident (Fig. 6).

DISCUSSION

The most characteristic pattern of this tumor are tubular and cystic structures lined by flattened or cuboidal epitheliums into which protrude papillary tufts which Schiller interpreted as representing imperfect glomerulus formation.[1] These clear cells forming tubular and cystic structures are described as "hob-nail" because of their projecting darkly staining nuclei with scanty cytoplasma.

It seems to be no question that the presented case belongs to the group of tumors originally described by Schiller[1].

By histochemical studies, many authors have reported the following results; the mesonephroid tumors contained mucine in the lumina of the tubles, but not in the cells, whereas glycogen was found in the cells rather than in the lumina.

Also, results of this case is similar to these cases.

Although these seems as agreement on the histologic and histochemical feature of this entity, histogenesis of this tumor has still a controversial matter with the result that this distinct entity has yet not satisfactory name.

On the differential diagnosis, Teilum enhanced the results that the mesonephroma and some of testicular tumors reproduced structure comparable with the endodermal sinus of the rat's placenta, and adovocated the term "endodermal sinus tumor" for these neoplasmas.[9] This genetical speculation as same as Teilum's was supported by Stowe.[6]

In the presented case, there also are typical features of Teilum's (Fig. 1-A an d 4-A to D) that perivascular formation with mantles or star-like halos of cells, but at present, it is unable to criticize their support with one case only. Mesonephroid tumor is seen mainly in later life; the presented case is 25 years old, on the other hand endodermal sinus tumor is predominantly one of children and young adults.[16]

Stromme and Traut, finding areas of papillary cystadenoma or cystadenocarcinoma as well as an occasional areas of granulosa and thecal elements, believed that the tumor was teratoid one.[3] Santo and Willis also were agreed with their concept.[18]

In the author's opinions, it is likely that their conception does not seem to be a good one, because the presented case does not show the pattern in association

with such areas as them and the tumors are usually malignant.

Scully and Barlow found an important association between mesonephroma and ovarian endometriosis or endometrioid carcinoma.[14] Their illustrations suggested transitions from mesonephroma to endometrioid carcinoma, which they considered to be Mullerian in origin. Anderson was inclined to agree with them because of the following findings ; 4 of their 22 cases had endometriosis, mesonephroid and endometrioid tumors presented in the same ovary and they showed similar distribution of glycogen and mucin.[16]

But, in this presented case there is no focus of endometriosis and such transition. In an endometrioid carcinoma the authors cannot have observed the cystic structure lined by hob-nail cells.

Okagaki et al. obtained the results that the neoplastic cells did not resemble those seen in endometrioid carcinoma of the ovary or renal cell carcinoma by an ultrastructural study of mesonephroma ovarii.[15]

Saphir and Lackner, although supporting a mesonephric theory on histogenesis suggested by Schiller, believed that their cases were identical with carcinoma occuring in the kidneys, and suggested the term "hypernephroid carcinoma" or "clear cell adenocarcinoma".[4]

It was said by many reports that "Mesonephroma ovarii" by Schiller and "Hypernephroid carcinoma" by Saphir are essentially variant of one tumor.[7][11][12]

The authors imagine that there are two varieties in mesonephroma ; i, e., the one is from a primordial germ cell which forms extra-embryonic mesodermal structure, and the other one is the true mesonephroma which develops from the sites where the mesonephric rests are.

Cosequently, to avoid confusion on diagnosis it seems better to use the term "Mesonephroid tumor of the ovary" without comitting itself as to histogenesis untill more can be known about it as postulated by Anderson and Langley.[16]

It has been found to coexist with carcinoma or adenocarcinoma-like features in some cases of tubal tuberculosis. So it is probable that, at least, some of these coexistences have been erroneously suggested as an important predisposing factor of tubal carcinoma.[17]

This presented case didn't produce such adenocarcinoma-like features around or within the tuberculous focus.

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