

MESONEPHRIC TUMOURS OF FEMALE GENITAL TRACT

(Report of 2 Cases)

by

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Introduction

Tumours of mesonephric vestigial origin may develop at different levels of female genital tract. These tumours according to Schiller (1939), may be benign or malignant, but majority of the reported cases have been in the latter group. Two such tumours are being recorded; one in the cervix and the other in the ovary.

CASE REPORTS

Case 1

Mrs. S.P., aged 19, Hindu, nullipara, married for 18 months was admitted at District Hospital Midnapore on 12.1.1974. She had amenorrhoea for 4 months and a swelling in abdomen, which she noticed was enlarging rapidly. Previously she thought that she had conceived but the rapid rate of growth and pain in the swelling worried her for which she came for medical help. Her previous menstrual history was normal. There was no significant information in her past, personnel or family history.

Her build and nutrition were average; she had slight pallor. Her blood pressure was 110/70 mm. of HG and pulse rate was 110 per minute. General examination revealed no abnormality.

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On abdominal examination, fairly big lump about the size of 28-30 weeks gravid uterus was palpable occupying the hypogastric and right lumbar regions. The lump was reasonably mobile, firm in feel and was tender on palpation.

On vaginal examination uterus was of normal size, felt separate from the lump with healthy cervix. The lower pole of the lump could be felt through the right fornix while the left fornix and Pouch of Douglas were free.

Routine examination of blood showed low haemoglobin concentration (58%) with slight leucocytosis (10,000/cm). No significant abnormality was detected on urine analysis. Straight x-ray of the abdomen revealed no foetal shadow.

Laparotomy was performed under general anaesthesia on 20.1.1974. Right paramedian incision exposed a right ovarian mass glistening in appearance and about 15 inches in diameter without any adhesion to adjacent structures. The uterus, other tube and ovary were normal. Right salpingo-oophorectomy was performed. As the tumour appeared solid, abdominal viscera and parietis were meticulously checked to exclude metastatic deposits. Considering the age of the patient and in view of the fact that there was no clinical evidence of spread of the tumour the uterus with the normal tube and ovary were left behind. She made an uneventful recovery and was discharged from the hospital on 12th postoperative day.

The specimen was sent for histological examination. Hemisection revealed variegated appearance of the tumour with cystic spaces at places.

Histological features were characterised by the presence of clear cells in glandular and tubular pattern. (Fig. 1). Cystic spaces were

lined by low columnar and cuboidal cells. Inside the cystic spaces papillary tuft like structures projected and PAS positive material was seen in these structures. The stroma was loose and oedematous in character. Histologically this tumour was diagnosed as a mesonephroma.

Case 2

Mrs. I.M., aged 40, Para 4-0, last childbirth 8 years ago was referred to Cancer screening clinic on 12.6.1975. She complained of watery vaginal discharge and occasional intermenstrual bleeding.

On examination, nutrition was average; she had slight pallor and her blood pressure was 130/90 mm. of Hg. Systemic and abdominal examination revealed no abnormality.

On speculum examination, cervix appeared bulky having small areas of erosion on both lips. A small polypoidal mass, about 2.5 cm x 2.5 cm. was found protruding through the external os attached to the antrolateral wall of the exocervix by a thin stalk. The polypoidal mass bled slightly during speculum examination. Due to contamination of blood, smear taken for cytological examination was not satisfactory. The polyp however was twisted and sent for histological examination. Punch biopsy material collected from a different part of the ectocervix was also sent for similar examination.

On bimanual examination, the uterus was retroverted, bulky but firm and mobile. Appendages were not palpable.

Rectal examination revealed no parametrial induration and pelvic walls were free. As vaginal smear was unsatisfactory, definite cytological opinion could not be obtained.

The polypoidal mass and tissue from the cervix were histologically examined. There were clumps of cells having clear cytoplasm mainly arranged in cords and trabeculae and often arranged in adenomatous pattern. The glandular and the tubular spaces were often lined by cells having darker cytoplasm and hyperchromatic nuclei (Fig. 2). The stroma was scanty and loose in texture. This mass was diagnosed as adenocarcinoma of the cervix of mesonephric vestigial origin.

As the diagnosis of the polyp arising from the cervix was adenocarcinoma, Werthliems hysterectomy was performed on 5.7.1973. With the growth located in the cervix without any clinical evidence of extracervical extension, the

tumour was classified as stage 1 adenocarcinoma cervix.

Patient made an uneventful recovery. Histological report of the lymph nodes revealed no evidence of metastasis. At follow up examination on 13.3.1974, a small indurated lump could be felt on the right lateral pelvic wall. She was however symptom free. This, we thought, could be either metastatic nodule or a lymphocyst. However, she had a course of Telecobalt therapy and though that small lump is still persisting, it has surely not increased in size and the patient is keeping a perfect normal health performing her normal activity.

Discussion

The complex and varied histological patterns observed in these mesonephric vestigial tumours have made the histogenesis somewhat confusing. Schiller in 1937 first described a special type of tumour in the ovary which he designated as mesonephroma. He found some specific structural units within the tumour and imagined these to represent imperfect foetal mesonephric glomeruli.

Kazancilgil *et al*, (1940), however, failed to confirm Schiller's mesonephric hypothesis. Because of presence of mucin in the tumour and of nests of granulosa cells, dysgerminomatous areas and foci interpreted as haemopoietic tissue they suggested that the tumour was essentially teratomatous in nature. Stromme and Traut (1943) also held the same view and considered that "Teratoid Adenocystoma" would describe the growths more appropriately. Novak and Woodruff (1967) contradicted teratoid origin.

Teiliem (1946) suggests that mesonephroma reproduces structures comparable with the endodermal sinuses (Yolk sac endoderm and allantoic mesoderm) of the rats placenta and suggested the term "endodermal sinus tumour" for these ovarian neoplasms.

Evans (1968) also believes that these group of tumours belong to the embryo-

nal carcinoma group of neoplasms that bear some morphological resemblance to the testicular embryonal carcinoma of young children.

Saphir and Lackner (1944) on the other hand, consider that these tumours are "clear cell adenocarcinoma". They formed this opinion by observing large, clear and cuboidal cells in the tumours which are similar to those found in adrenal tumours or hypernephromas.

Novak and Woodruff (1967) have emphasised that both "mesonephroma" of Schiller and "Clear Cell adenocarcinoma" of Saphir and Lackner are mere variants of a basic mesonephric rest origin. Strictly speaking, mesonephroma of the ovary is not really an ovarian tumour, but its originating cells lie in such close proximity that the gonad itself is usually completely replaced by the tumour.

The case presented here corroborates the histological picture suggested by Saphir and Lackner. Our histological finding in the case of ovarian mesonephroma does not corroborate the view of embryonal carcinoma neither it confirms the concept of teratoid origin.

Regardless of the extent of surgery or the degree of irradiation, mortality is 50 per cent when the tumour is localised to the ovary but becomes 100 per cent with extra ovarian extension Novak and Woodruff (1967). The patient reported here was young and as clinically no extraovarian extension was detected, the uterus and the other ovary were preserved. She is still alive without recurrence one year after the operation, but has not yet conceived.

The histological picture of cervical adenocarcinoma arising from mesonephric rests is similar to ovarian mesonephroma. But unlike mesonephroma of the ovary,

hisogenesis of mesonephric vestigeal cervical adenocarcinoma is less disputed. Teilum (1954) suggests the origin from primitive mesonephric tissue rather than persistent mesonephric duct. Mackles *et al*, (1958) classify these lesions into two groups; (a) lesions arising from residues of the mesonephric duct (b) tumours arising from "embryonic source tissue" derived from nephrogenic cord and possibly carried to the cervix by either the mulerian or the mesonephric duct.

Closely packed glandular structures of varying size and shape lined by cuboidal epithelium with intraglandular papillary projection helped us to establish the diagnosis of adenocarcinoma of cervix of mesodermal vestigeal origin in this case. This histological picture is similar to those observed in mesonephroma of the ovary. As suggested by Saphir and Lackner, these tumours may also contain clear cells but this specific histological feature was absent in the case reported here. But as stated earlier, these clear cell adenocarcinoma are also of mesonephric vestigeal origin.

This type of tumour is generally thought to be less malignant than other forms of cervical cancer (Evans, 1968; Novak and Woodruff, 1967). The present case had the growth limited to the cervix without parametrial involvement or lymph gland metastasis. Though Novak and Woodruff (1967) are of opinion that these growths respond less favourably to irradiation, Mackles *et al*, (1958) have reported marked radiosensitivity in 3 cases and only one out of these 3 cases had recurrence 29 years after treatment. In spite of the glands being negative, we have used telecobalt therapy 8 months after operation for obvious reasons. She is in perfect health

without recurrence 2 years after the radical operation.

Summary

1. Two cases of mesonephric vestigeal tumours have been reported; One, mesonephroma of the ovary and the adenocarcinoma of the cervix of mesonephric vestigeal origin.

2. Histogenesis of the tumour is disputed. But the fact, that these tumours having more or less an uniform histological pattern may arise at any level of the genital tract is accepted.

3. The tumours may be benign or malignant, but the malignant variety is more common. The two tumours reported here were malignant.

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References

1. Evans, W. R.: Histological Appearances of tumours. E. & S. Livingstone Ltd., London, P. 690, 1968.
2. Kazancigil, T. R., Laqueur, W. and Ladewig, P.: Amer. J. Cancer, 40: 199, 1940.
3. Mackles, A., Wolf, S. A. and Neigus, I.: Cancer, 11: 292, 1958.
4. Novak, E. R. and Woodruff, J. D.: Gynaecologic and Obstetrics Path. Sixth Edition W. B. Saunders Co. Philadelphia, London, P. 100 and 349, 1967.
5. Saphir, O. and Lackner, J. E.: Surg. Gynec. & Obst., 79: 539, 1944.
6. Schiller, W.: Amer. J. Cancer, 35: 1, 1939.
7. Stromme, W. B. and Traut, H. F.: Surg. Gynec. & Obst., 76: 296, 1943.
8. Teilum, G.: Acta Path Microbic Scand., 34: 431, 1954.

See Figs. on Art Paper IX