The remaining 5% or so of cervical cancers may be

a) adeno carcinoma
b) adeno-squamous carcinoma
c) adenoid cystic carcinoma
d) undifferentiated carcinoma
e) Rhadomyosarcoma
f) metastatic carcinoma

Conclusion:

Cancer of the cervix is by far the most common cancer in Fiji for all ethnic groups. Therefore, priority should be given to the prevention and control of this form of cancer, because it is easily detected, and is curable by simple means when detected early.

For early detection of cervical cancer, the cytology programme should be intensified and visits to the family planning clinics should be utilised for taking smears. In addition an intensive programme of health education for both professional and the general public, by means of posters, leaflets, pamphlets, newspaper, articles and radio broadcasts should be started. In this respect, the help of the Anti-Cancer Society should be sought.

In the general context of a health care programme upgrading of the diagnostic facilities for cancer detection is not worthwhile unless the opportunity for adequate treatment is available. In Fiji there are no facilities for treating effectively, invasive cancer of the cervix. Unfortunately, the majority of the cancers that we see are invasive cancers i.e. stage 1b and upwards. Indeed, most of the cancers we find are clinically obvious of the 35 cases seen in the first 6 months of this year, 28 cases (80%) were stage II and upwards. In contrast in developed countries, over 50% of cases are discovered when they are small localised lesions i.e. stage 0 and 1.

Therefore, there is an urgent need to set up a modern diagnostic centre, including a radiotherapy unit in Fiji. This will benefit greatly the people of Fiji and the neighbouring countries of the South Pacific which has a total population of approximately three million. In addition it is essential that we set up a cervical cancer screening programme where every woman who may get this disease, is screened yearly.

TERATOMA

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Introduction

Two interesting obstetric/? paediatric and gynaecologic pathology cases that came to our notice — one in May and the other in June, are presented.

Case I — (H 1191)

Female, Rotuman, 13 years old

History:

This child was referred from Rotuman Hospital with a 5 month history of lower abdominal swelling. The swelling was small initially and grew rapidly to a considerable size in five months. There were no other symptoms.

Locally:

A firm, round, fluctuant and mobile swelling the size of a 24 week uterus was felt in the lower abdomen. It was nontender and resonant to percussion. There were non pulsations or bruit.

At operation a multilocular encapsulated tumour of the right ovary with cystic and soft semi-solid areas was seen. There was no distinguishable ovarian tissue evident. The uterus was small, regular and mobile. The left ovary was normal except for a cyst measuring approximately 5 x 3 x 2cm. Liver and omentum appeared unremarkable. Small amount of straw coloured peritoneal fluid was present.

A right salpingo-ophorectomy was done. The omentum was biopsied and some peritoneal fluid was taken for cytology.

Pathology:

Gross: Specimens were received separately in three containers.

A) Was a pale and grey cystic mass 20 x 14 x 7cm. The outer surface appeared unremarkable. On sectioning multiple cysts ranging from 1cm to 5cm in diameter containing straw-coloured fluid was revealed. In addition solid areas containing hair, teeth, bone, sebaceous material, fat and brain tissue were seen.

b) Labelled omentum was a fibro-fatty tissue measuring 5.5cm in length.

C) Was 30mls of haemorrhagic ascitic fluid.

Microscopic:

A) The cystic areas noted in the gross were lined by skin type epithelium with its adenexal structure such as hair follicle, sweat glands and sebaceous

glands. Respiratory epithelium together with submucous glands and cartilage were also present.

In solid areas a haphazard arrangement of smooth muscle bundles, islands of pro-cartilage and respiratory epithelium were seen embedded in a dense fibrous stroma. Mature neural tissue was present and this had a focal area of meningotheliomatous meningioma. Extensive focal areas of immature neuroepithelium forming neuroectodermal canals were seen. From the above histological appearance the diagnosis of Malignant Teratoma of the ovary (Grade II/III) was established.

The omentum showed floroid sarcoid reaction containing small numbers of carrot shaped malignant cells. The ascitic fluid also contained malignant cells.

Post-operatively things were uneventful. The line of management next was for a total hysterectomy and left salpingo-ophorectomy. Unfortunately, the child refuses another surgery and she is now in Rotuma.

Summary:

Ovarian teratomas make up one fifth of all ovarian tumours. Most are cystic and benign. 10% are bilateral. 1% of all ovarian teratomas are malignant and these usually present before patients are 25 years of age. The usual presenting features are abdominal distension and discomfort with irregular vaginal bleeding.

The prognosis is poor especially if malignant teratomas have mixtures of dysgerminomas, yolk sac tumours or choriocarcinomas. If the tumour has spread beyond the primary site than its bulk should be reduced as much as possible at the initial operation followed post operatively with Vincristire combination therapy consisting of vincrestic, actinomycin D and cyclophosphamide (VAC). The chemotherapy regimen should be continued for two years as a monthly five day course.

CASE II

Female, Fijian, aged 21
Primigravida
LMP — 30th October 1979
VDRL — Non-reactive

Ante-natal History:

The patient was persistently large for dates by 3-4 weeks. She also complained of constant backache and lower adbominal pain. Twins were suspected and when she was of 31 weeks gestation by dates a plain xray of the abdomen was done which revealed a single foetus of 30-32 weeks gestation.

At 33 weeks the patient was admitted because she had slight P.V. bleeding and did not feel foetal moments (for the past four days). The following day she started draining liquor and was referred to C.W.M. Hospital where she delivered aEx 1.8kg male baby measuring 42cm in length. The baby died 20 minutes after delivery. On examination a prominent baggy sac was found protruding from the buttocks.

Following delivery of the placenta a large "mole" was delivered. The placenta was normal except for a large retro-placental clot.

Pathology:

Gross: Specimens were received in the same container.

A) Was a placenta measuring 22.0 c 16.0 x 3.0cm. The umbilical cord measured 40cm and had a central attachment. The membranes were complete and the cotyledons unremarkable.

B) Was a globular grey and tan mass measuring 18.5 x 11.5 x 3cm. The surface was slightly irregular and no definite encapsulation or blood vessels seen. On slicing a variegated pale and haemorrhagic surface was revealed. In some areas the tumor was soft and in others it was quite firm. Bone was not present.

Microscopic:

A) The placenta histologically appeared unremarkable.

B) The tumour appeared to be encapsulated by attenuated mesenchymal tissue. Embedded in a fibro myxoid stroma was a helter-skelter arrangement of smooth and cardiac muscle, microscopic cysts lined by columnar epithelium, sweat glands and in areas what appeared to be epidermal inclusion cysts. Primitive neuroepithelium forming neuroectodermal tubes were seen. From the above histological appearance the diagnosis of malignant teratoma possibly of the placenta (Grade II/III) was established.

A month following delivery she had a D&C which on histological examination revealed decidual tissue and there was no evidence of malignancy. Gravindex test is negative and the patient is well.

It could be argued strongly that the teratoma may in fact have been a sacrococcygeal teratoma of the infant. It is unfortunate that the baby was not autopsied.

Summary:

The placenta is a rare site for teratomas. Placental teratoma was first reported in 1925 by Morville.

At the first three months of foetal development there is evagination of the primitive gut into the umbilicus. It is thought that germ cells migrate through the gut on to the cord and this may give rise to a teratoma here and if it migrates further, it may come to lie between the amnion and the foetal surface of the placenta and give rise to a teratoma here. Occasionally in normal pregnancies, intestinal mucosa is noted in the umbilical cord.

The points of differentiation between a placental teratoma and foetus amorphous is:

(a) absence of umbilical cord
(b) absence of axial skeleton
(c) No recognisable cephalad or caudal poles

Though the above summary is the generally accepted view, a few placentologists differ. According to Benirschke, the reported cases of so called teratomas of the placenta are in fact examples of included twin or foetus amorphous. He points out that the histology of the reported cases describe the silent feature that the "tumors" were encapsulated by skin. According to him this rules out the possibility of teratomas since skin is part of and included in the teratoma and does not form the covering. The covering is by the host's resident tissue.

Discussion:

A teratoma is a tumour composed of multiple tissue of kinds foreign to the site in which it arises and that the embryological origin of the tissue elements can be traced to all the three germ layers. In addition the association of the tissues is in a similar manner to that in which they are seen in the normal body.

Sites of Teratomas:

Teratomas are found in the midline or in unpaired organs whose embryological origin is the midline. The commonest sites are the gonads — the ovary in the female and the testis in the male. Ovarian teratomas as dermoid cysts out number all other tumours of this type.

Other common sites in decreasing order of frequency are:

(a) **Sacrococcygeal Teratoma:**

This is the commonest teratomatous tumour in children especially females and has a striking propensity for malignant change if not excised especially when the infant is over four months old. The diagnosis is usually established at birth or within the first month and presents as a mass between the sacrum and rectum. If the lesion grows cephalad it may present as a retroperitoneal mass or it may extend in front of the coccyx to form a protrusion at the base of the spine.

(b) **Mediastinal Teratoma:**

This is usually found in the anterior mediastinum and is benign and cystic. Only a small percentage of these teratomas become malignant. The patient may be asymptomatic or present with recurrent chest infections. Coughed up hair or teeth seen on chest xray is a diagnostic sign.

(c) **Retroperitoneal Teratoma:**

Arises frequently in the upper abdomen as a cystic tumour. The usual presenting feature is an increase in the abdominal girth. 10% of cases become malignant.

An interesting variant is the condition foetus in foetu. The lesion consists of more or less well formed foetuses in which there is an axial skeleton and usually limb buds with in some cases loops of apparent intestine. These are most probably an example of monozygosity and included twin.

(d) **Intracranial Teratoma:**

Most common site is the pineal gland followed by the hypothalamus. The presence of teeth does not necessarily indicate teratoma as teeth may occur in craniopharyngioma.

Other sites are:

- ★ Spinal cord
- ★ Neck
- ★ Oral cavity
- ★ Tongue
- ★ Eye and orbit
- ★ Uterus and fallopian tube
- ★ Kidney
- ★ Bladder
- ★ Stomach
- ★ Intestine
- ★ Liver
- ★ Lung
- ★ Heart
- ★ Placenta and umbilical cord

Morphology:

A) **Cystic Teratomas:**

These are usually benign and is common in ovaries. Infrequently it is seen in testis. The teratoma differentiates largely along ectodermal lines and takes the form of one small or large solitary cyst lined by apparent skin replete with hair bearing epidermis, sebaceous glands and other usual skin adenexal structures. In addition teeth, bone, islands of cartilage representing mesodermal component are present. This is the usual dermoid cyst.

B) **Mature Solid Teratomas:**

This is composed of a hetergenous "Helter-

skelter" collection of differentiated cells or organoid structures such as muscle bundles, islands of cartilage, neural tissue resembling cerebellum, clusters of squamous epithelium, thyroid tissue, bits of intestinal wall all embedded in a fibrous or myxoid stroma.

Benign variants are commonest in infancy and childhood. In adults, mature solid teratomas contain elements of immature tissue which comprise areas of cancer. Where solid teratomas even after a rigorous sampling appear benign in adults, such as diagnosis must be made in circumspect.

The main determinant of spread and life expectancy is of milignant teratomas is the histologic grade of the tumour (I-III) which depends primarily on:

i) The degree of immaturity of the tissue elements
2) The presence of neuroepithelium.

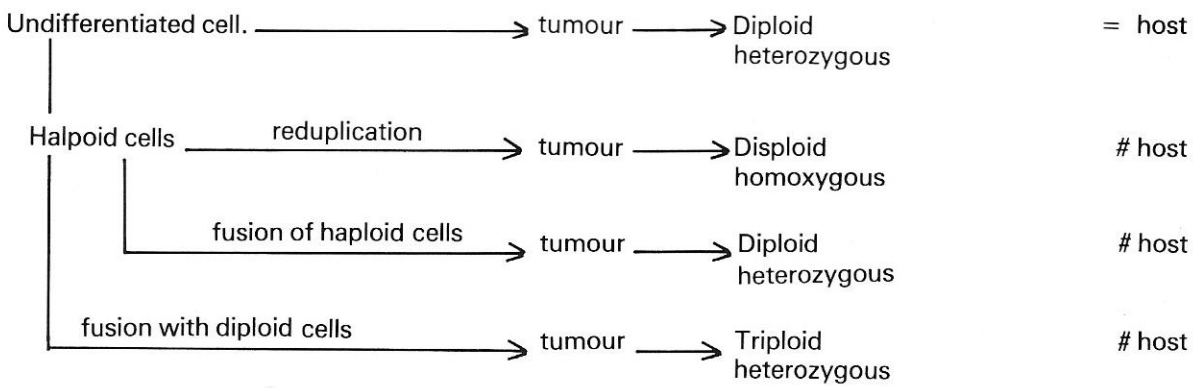
Higher grades contain fewer mature elements and more neuro epithelial structures.

Functional Activity of Teratomatous Tissue:

a) Autoimmune haemolytic anemia associated with ovarian dermoids.
b) Masculinisation in the presence of ovarian teratomas — Stimulates non-neoplastic ovarian mesochyme
c) Hyperthyroidism in struma ovarii
d) Carcinoid syndrome in carcinoid tumour of ovarian dermoid.
e) Gonadotrophic activity may be present.

Nature and Origin of Teratomas:

The cell of origin is a cell which retains full genetic capacity and may be regarded therefore as an undifferentiated cell, either a germ cell within the gonad or possibly segregated in the retroperitoneal tissues, or a cell which has escaped the activity of the organisers and is to be found in the midline at situations where peripheral embryonic cells fuse.



Acknowledegement:

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