

## SOME OBSERVATIONS ON CHORIOCARCINOMA CASES SEEN IN MEDICAL COLLEGE HOSPITAL, CALICUT

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India, particularly South India, along with other oriental nations, is reported to have high incidence of trophoblastic neoplasms. (Joint Project 1959; Kallianikutty and Nalini 1970). Hence the Medical College Hospital, Calicut, serving the Northern Districts of Kerala, South India, can be expected to have a high incidence of such tumours. Certain observations made on our cases were though worth reporting.

### *Material and Methods*

This report is based on the records of 21 cases of choriocarcinoma treated in the Medical College Hospital, Calicut, during the period 1968 to 71. During these 4 years we had 22,320 cases of term deliveries.

To get the average age and gravidity of our obstetric cases, 1000 consecutive cases of confinements in 1969 were analysed.

There was no uniform policy followed in treatment of these cases. But the usual policy was to undertake total hysterectomy and excision of vaginal nodule, if any, as early as the condition of the patient permitted. By about the 9th post-operative day, methotrexate was started.

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It was given to 9 patients; in two combined with 6 mercaptopurine. One received only 6 mercaptopurine.

Five of the patients died in the hospital and two were taken home moribund. Others were discharged cured or relieved.

Attempt was made to know the present condition of the patients discharged cured or relieved from the hospital in 1968 to 1970, by requesting them to report for a check up. Only 2 of them responded by letters and none in person. These 2 did not have any symptom suggestive of residual lesion, after 3 years in one case and 2 years in the other.

### *Observations*

The calculated incidence of choriocarcinoma in this series is one per 1062.8 deliveries.

The age, gravidity, type of antecedent pregnancy and the interval between the antecedent pregnancy and presentation with choriocarcinoma are shown in Table I.

Table II shows the age and gravidity of choriocarcinoma cases compared with those of normal obstetric cases.

Metastases were present in 17 of the cases (80.9%) and in 16 (76.19%) vagina was one of the sites. In 17 cases (80.9%) presenting complaint was bleeding per vaginam. In 7 cases (33.3%) pulmonary

TABLE I  
*Age, Gravidity and Antecedent Pregnancy*

S. No.	Age	Gravidity	Type of antecedent pregnancy	Interval between antecedent pregnancy & reporting (in days)
1.	24	2	Ves. mole	41
2.	45	7	-do-	1095
3.	25	2	-do-	16
4.	35	8	-do-	730
5.	32	1	Normal labour	2555
6.	37	5	Ves. mole	730
7.	24	4	Abortion	730
8.	41	10	Ves. mole	112
9.	50	18	Abortion	425
10.	45	9	Abortion	90
11.	35	11	Ves. mole	30
12.	42	12	Normal labour	90
13.	20	2	Ves. mole	60
14.	18	1	Abortion	150
15.	28	2	-do-	150
16.	30	8	Normal labour	548
17.	35	4	Abortion	180
18.	42	12	-do-	180
19.	38	7	Abortion	90
20.	22	3	-do-	120
21.	20	2	Ves. mole	38

TABLE II  
*Average Age and Gravidity Compared*

	Normal obstetric case	Choriocarcinoma
Age	26.57 yrs.	32.76 yrs.
Gravidity	3.46	6.19

secondaries appeared; 5 of them on admission and two later on.

Cystic ovaries were observed in 6 (28.6%); in 4 it being unilateral.

#### *Discussion*

Our incidence is similar to that reported from centres in India and other Asian

countries and much higher than that in Western countries.

But there is a common fallacy, not fully recognised in reports from Teaching Hospitals in Asian countries. That is the high prevalence of domiciliary midwifery and the privilege enjoyed by teaching hospitals as referral centres for difficult and unusual cases. Our hospital draws cases of normal delivery and abortion only from the city of Calicut and its suburbs, whereas choriocarcinoma and similar serious cases come from the entire Northern districts of Kerala (a radius of about 160 km) Nineteen of our 21 cases had their antecedent pregnancies attend-

TABLE III  
Incidence of Choriocarcinoma in Different Places

Place	Author	Incidence
Rhode Island (U.S.A.)	Yen and Mac. Mahon (1968)	1/40,000 deliveries
New York	Douglas (1969)	1/16,666 deliveries
Manila	Acosta-Sison (1967)	1/1148 Obste, cases
Hong Kong	Chan (1962)	1/6,250 pregnancies
Taiwan (Formosa)	Wei and Ouyang (1963)	1/496 deliveries
Trivandrum (South India)	Kallianikutty and Nalini (1970)	1/703 deliveries
Calcutta	Review by Bhaskar Rao (1970)	1/4,207 pregnancies
Madurai (S. India)	Review by Bhaskar Rao (1970)	1/1,338 pregnancies
Present series	Thankam and Paily	1/1,062.8 deliveries

ed elsewhere and 18 were referred from District or Taluk hospitals. The contention is that teaching hospitals report a false high incidence of choriocarcinoma per cases of delivery. This is at variance with the opinion of the Joint Project (1959).

The significant rise in age and gravidity in cases of choriocarcinoma agrees with the suggestion that increasing age and gravidity are contributory to choriocarcinoma. There were only 2 cases with single antecedent pregnancy—one with a normal labour 7 years before and separated from the husband since then and the other having had an abortion 5 months earlier. The oldest case, aged 50 years, was an 18th gravida.

In 9 (42.9%) of the cases vesicular mole preceded choriocarcinoma, in another 9 (42.9%) abortion and in the remaining 3 (14.3%) normal labour. Higher incidence of antecedent molar pregnancy is reported by various authors—Acosta-Sison (1965) 65%, Bagshawe (1969) 66%, Chatterjee (1970) 62.5%.

The interval between antecedent pregnancy and presentation with choriocarcinoma averaged 388.5 days. The shortest interval was 16 days and the longest 7 years.

In one case, a normal full term delivery and an abortion intervened between a vesicular mole and choriocarcinoma. This 4th gravida, had her first and third pregnancies ending as term deliveries, second a vesicular mole and 4th an abortion. Following vesicular mole she had a course of methotrexate also. Similar cases are reported by Bagshawe (1969), Barkla (1965) and Gerin-Lajoie (1954). It is difficult to say which of these pregnancies contributed the trophoblasts that turned malignant.

A similar high incidence of vaginal metastases was not found in any other report including the one from the Southern end of this State. [Kallianikutty and Nalini (1970)].

The reason for this, is not clear. It is not likely to be due to our cases reporting late because in that event a high incidence of pulmonary metastasis as well should have been seen. Bagshawe (1969) describes the mechanism of production of vaginal and vulval secondaries. Trophoblastic embolism at these sites results from a reversal of flow of blood through the uterovaginal plexus of veins, as will occur during straining when intra-abdominal pressure goes up. Most of our patients are of the working class and used to heavy physical work. People in

TABLE IV  
Incidence of Pulmonary and Vaginal Metastases

Author	Total No. of cases	Cases with secondaries	Pulmonary secondaries	Vaginal secondaries
Bhaskar Rao (1970)	121	80 (66.1%)	70 (59.85%)	38 (31.4%)
Kallianikutty & Nalini (1970)	61	34 (55.7%)	18 (30%)	17 (28%)
Bagshawe (1969)	100	—	66	18
Park & Lees (1950)	295	—	158 (53.5%)	105 (35.6%)
Novak & Seah (1954)	74	—	41 (55.4%)	12 (16.2%)
Present series	21	17 (80.9%)	7 (33.3%)	16 (76.19%)

this country are used to the squatting position for defaecation, rather than sitting on a commode. These increase the chance of reversal of blood flow and can be the reason for the above observation.

#### Summary

Observations based on 21 cases of choriocarcinoma are presented. Incidence is found to be higher than in the Western countries. However, the fallacy of over-reporting due to the high rate of domiciliary midwifery is pointed out. High incidence of vaginal metastasis was observed and possible reasons are suggested.

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