

# PRIMARY ADENOCARCINOMA OF CERVIX

by.

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Primary adenocarcinoma of the cervix is not a common tumour. Interest has always been centred around the biological behaviour of these tumours and also its curability by means of radiotherapy. Not many articles have been published in the world literature on it, more particularly in Indian journals. With this in mind, 86 cases of primary adenocarcinoma of the cervix, seen at the Chittaranjan Cancer Hospital, Calcutta, during the period of 1950 to 1964, were studied with a view to evaluate the results.

### Material and methods

At this hospital 7229 cases of malignancy of the female genital tract were seen from 1950 to 1964, of which 6311 cases belonged to carcinoma of the cervix (87.3 per cent). Out of these latter cases there were 86 cases of adenocarcinoma, (an incidence of 1.4 per cent). The incidence of squamous cell carcinoma was 98.6% and

adenocarcinoma of the cervix 1.4%.

Hepler and Co-workers (1952), reviewing the literature, collected 697 cases of adenocarcinoma from amongst 15,476 cervical cancers, an incidence of 4.5 per cent. Marcus et al (1963) also found the incidence to be 4.8 per cent. But in this series the incidence is much less.

*Age*—The age incidence is shown in Table 1.

The average age incidence was 46.7 years. The youngest patient was 25 and the oldest one 70. Pollack and Taylor (1947) reported that there was a significantly high proportion of adenocarcinoma in women below the age of 20 (22 cases out of 30). Graham and his associates stated that all the 20 cases of cervical cancer occurring in children were adenocarcinomas. There was none in this series.

*Marital status and parity*—All women were married. Table 2 shows this disease has no relation to parity.

Only two patients were nulliparous

TABLE I

20-29	30-39	40-49	50-59	60 and above
4	20	28	23	11

TABLE II

Para 0	1	2	3	4	5	6	7	8	9 & Above
2	12	8	13	8	9	5	6	6	17

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and the rest were parous. There was one case who had 15 pregnancies.

*Menstrual history*—Thirty-five patients in this series were post-meno-

pausal, whereas in 51 patients the disease was found before the menopause.

*Symptomatology*—The commonest symptom was vaginal bleeding which was present in 74 patients. Fifty-one patients complained of sero-sanguineous discharge, and pain was present in 38 cases. In 7 cases some other symptoms were present such as dysuria, difficulty during defaecation, mass in the lower abdomen, ascites and swelling.

*Clinical Staging*—Out of 86 cases, 19 were in Stage I, 16 stage II, 41 Stage III and 8 Stage IV. In two cases staging was inconclusive as they were operated outside. The diagnosis in these cases was not established before the operation and total hysterectomy with bilateral salpingo-oophorectomy was done.

In table 3, a comparison between the incidence of stage distribution of adenocarcinoma of cervix with that of squamous cell carcinoma, seen in this institution from 1950 to 1964, has been made.

ing about 80.8 per cent in cases of squamous cell carcinoma and 57 per cent in cases of adenocarcinoma, whereas the incidence of stages I and II was 19.2 per cent in cases of squamous cell carcinoma compared to 40.7 per cent adenocarcinomas. This series also agrees with Marcus and Marcus (1963) that patients with adenocarcinoma of cervix do not present in more advanced stage of the disease than that of squamous cell carcinoma.

*Histology*—In this series all adenocarcinomas were invasive in character with different histological patterns such as papillary, adeniform, mucinous, adeno-acanthomatous etc. There was not a single case of adenocarcinoma in situ of the cervix in this series. There were 2 cases of adeno-acanthoma in which both adenomatous and squamous elements were well recognized with varying degrees of pearl formation and keratinization. The nature of their origin is still obscure, probably they are metaplastic derivatives of adenocarcinoma.

TABLE III

*Comparison of stage distribution between adenocarcinoma and squamous cell carcinoma of cervix*

	Stage I		Stage II		Stage III		Stage IV	
	No. of cases	Percentage	No. of cases	Percentage	No. of Cases	Percentage	No. of Cases	Percentage
Adenocarcinoma.	19	22.1	16	18.6	41	47.7	8	9.3
Squamous cell car.	455	7.5	714	11.7	4021	66.2	888	14.6
Total	474	7.7	731	11.9	4062	65.9	896	14.5

From the above table it becomes evident that more cases of advanced carcinoma of cervix were seen in our institution, stages III and IV compris-

*Associated lesions:* There was co-existence of 6 cases of endometrial adenocarcinoma along with this disease. It is now possible histo-

chemically to determine the site of origin of adenocarcinoma involving the endocervix and endometrium. Regular high palisade cells are suggestive and demonstration of mucin is regarded as proof of endocervical carcinoma. Special stains such as mucicarmine or mucin or periodic acid-Schiff (PAS) for the carbohydrate in mucin are useful. Endometrial carcinomas usually give negative results with these stains whereas endocervical ones give positive results. Unfortunately histochemical tests were not done in our laboratory to determine the site of origin.

There was one case of adenocarcinoma of the cervix, Stage III, where papillary cystadenocarcinoma of both

in spite of our best efforts.

Of 66 cases treated, 16 were operated by Mitra's technique (radical vaginal hysterectomy with bilateral extraperitoneal lymphadenectomy). Three of them had a course of external radiation later on. The two cases, who were operated outside, were treated with external radiation along with bilateral extraperitoneal lymphadenectomy. The rest of the 48 cases were treated with radiotherapy which included 3 applications of radium along with a course of external radiation.

*Results*—From 1950 to 1960, only 33 cases were treated and were followed up. Results have been shown in Table 4.

TABLE IV  
Five-Year Survival Rate (1950 to 1960)

Stage of disease	No. of cases treated	Surgery & radiation	Radiotherapy	Per cent of Survival	No. of L.S.O.
I	11	7	4	64	....
II	10	4	6	20	1
III	11	....	11	9.1	3
IV	1	....	1	....	....
Total	33	11	22	30	4

ovaries was also found. Though in such circumstances ovary is thought to be the primary site, occasionally they might be multicentric in origin.

*Treatment*—Out of 86 cases of adenocarcinoma of the cervix seen in this institution during the period under review, 66 were treated. Treatment could not be given in 7 cases as the disease was far too advanced. It is needless to say that their general condition was also poor. Thirteen patients did not turn up for treatment

The 5-year survival rate for all stages was 30 per cent (10 cases out of 33 survived). Four patients were lost sight of.

In table 5, a comparison of the number of survivors of adenocarcinoma has been made with that of squamous cell carcinomas seen in our institution from 1954 to 1959. The overall survivors of all stages of squamous cell carcinomas were 22 per cent compared to 30 per cent of adenocarcinoma. From these figures it might be concluded that adenocarcinoma of

TABLE V  
Comparison of survival rates for adenocarcinoma & squamous cell carcinoma of cervix

	Adenocarcinoma			Squamous cell carcinoma		
	No. of patients (1950 to 1960)	No. of Survivors	Percentage	No. of patients (1954 to 1959)	No. of Survivors	Percentage
Stage I	11	7	64	118	69	58.5
Stage II	10	2	20	203	70	34.5
Stage III	11	1	9.1	834	121	14.5
Stage IV	1	Nil	0	30	1	3.3
	33	10	30.0	1185	261	22.0

the cervix does not have a lower curability rate than that of the squamous cell carcinomas.

The main reason of poor salvage rate in our institution is that more cases of advanced carcinoma of cervix are seen than early ones.

In table 6, the survival rates of adenocarcinoma reported in other series from 1949 up to recent years have been shown:—

TABLE VI  
Reported 5 year Survival rate

Author	No. of cases	5 yr. Survival (%)
Carter et al 1949	50	12
Gusberg & Corscaden 1951	48	25
Hepler et al 1952	164	24.8
Baker et al 1964	31	27
Kottmeier 1955	250	44
Tremblay et al 1960	60	34.8
Abell & Gosling 1962	117	29.9
Marcus & Marcus 1963	42	40.4
Roy 1966	33	30

The important problem to be discussed is whether these tumours are radiosensitive or not. Hepler et al (1952) are of the opinion that adenocarcinoma of cervix is apparently more radio-resistant than squamous cell carcinoma of the cervix. Gusberg and Corscaden (1951) found that

among 13 articles in which 16 to 185 cases were reported, there was no difference found in the radiosensitivity of adenocarcinoma & squamous cell carcinoma. Kottmeier (1955) claims that adenocarcinoma of cervix is more radiosensitive than epidermoid carcinoma. The difference is that they are perhaps a little less radiocurable than the epidermoid carcinoma because of higher percentage of distant metastases. Mckelvey and Tompkins also agree with this view point. Graham and his associates, in discussing the radiocurability of adenocarcinoma, stated that this claim cannot be supported with the data now in hand and they conclude "there is no reason to treat adenocarcinoma and squamous carcinoma in different ways."

The present series is too small to come to any definite conclusion. But it is hoped in the near future when all these 66 cases could be followed up, some conclusion can be reached. However, it could be seen from the present series that curability rate of adenocarcinoma does not differ at all from squamous cell carcinomas and I share the opinion of Graham and his associates that there is no reason to treat them differently.

*Summary and Conclusion*

(I) Eighty-six cases of adenocarcinomas were seen in Chittaranjan Cancer Hospital from 1950 to 1964, making an incidence of 1.4 percent.

(II) The average age incidence was 46.7 years; 51 patients were premenopausal whereas 35 patients were post-menopausal.

(III) 40.7 per cent of cases were in Stages I and II whereas 57 per cent were in Stages III and IV. Staging was inconclusive in 2 cases.

(IV) Most of the adenocarcinomas were well differentiated. There was co-existence of endometrial carcinomas in 6 cases and bilateral papillary cyst-adenocarcinoma of ovary in 1 case.

(V) Fifty patients were treated by radiation including the two who were operated outside, 13 by operation and 3 by operation and radiation; 33 patients were followed up and 5-year salvage rate was 30 per cent. Curability rate of adenocarcinomas does not differ from squamous cell carcinomas of cervix.

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