

## A B O R T I O N S (A Statistical Survey)

by

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Here is a statistical study of 1010 cases of abortions from the L.T.M. Hospital, Sion, Bombay, admitted in the years 1957-58.

### *Incidence*

In computing the present series, only the indoor patients who actually aborted are considered. Patients treated in the Out-patients Department, or those admitted as threatened abortions and discharged as such, have not been included.

Table I shows the incidence of abortions as compared to that of viable births in 1957-58.

TABLE I

	1957	1958	Total
Total number of confinements	5422	5497	10919
Number of viable births	4955	4954	9909
Number of abortions	467	543	1010
	(8.61%)	(9.87%)	(9.25%)

Ratio of abortions to live-births in two years: 1 to 9.81.

N.B.: Any foetus weighing less than 1 lb. in weight or less than 28 weeks' gestation is considered as an abortion.

Paper read at the 10th All-India Obstetric and Gynaecological Congress at Hyderabad in January 1959.

Table I gives an incidence of 1010 abortions out of 10919 confinements, or an overall incidence of 9.25%. This incidence is comparable to the figures of various authors who have worked on the subject, all of whom fix the incidence somewhere between 9% and 10%, which the single exception of Malpas, who puts it as high as 18%. The figures of various authors are summarised for comparison in Table II.

TABLE II

### *Incidence of Abortions in the Various Series*

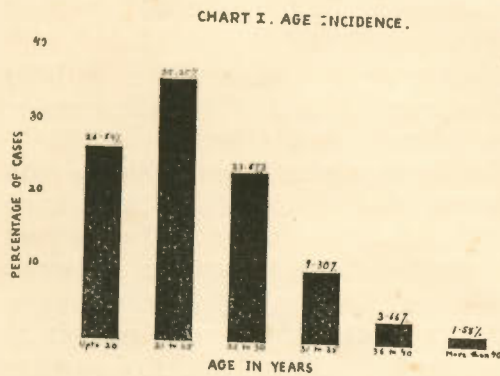
Author	Incidence of abortions
1. Malpas .. ..	18.0%
2. Pearl .. ..	11.8%
3. Stix .. ..	10.9%
4. Hertig .. ..	10.6%
5. Guttmacher .. ..	9.8%
6. Wiehl and Berry .. ..	9.7%
7. Five American authors quoted by Hertig .. ..	9.8%
8. Present series .. ..	9.25%

### *Age Incidence*

Table III and Chart 1 show the frequency of abortions in various age groups.

TABLE III  
Frequency of Abortions in Age-groups

Age in years	1957	1958	Total	Percentage
Less than 20	116	152	268	26.54
21-25	165	191	356	35.25
26-30	115	124	239	23.67
31-35	49	45	94	9.30
36-40	16	21	37	3.66
More than 40	6	10	16	1.58
Total	467	543	1010	



The highest abortion rate occurs in the age group of 21-25 years. This corresponds to the most fertile phase of the reproductive cycle, so the number of conceptions is the highest in this age group.

The falling incidence of abortions after 30 years of age corresponds to

the diminishing number of pregnancies at this age.

The high incidence in the youngest age group of less than 20 years (26.54%) is noteworthy, as it indicates the young age at which our women become pregnant, as compared to the women of Western countries.

In this series, the youngest patient was 14 years old and the oldest 48 years.

#### Parity

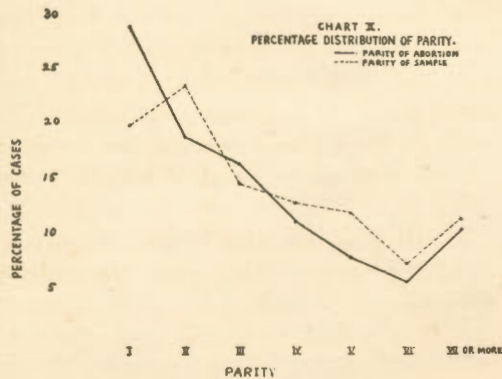
Table IV shows the distribution of abortions according to the parity of the mother.

Chart 2 shows the parity distribution of abortions in our series. It also shows the parity distribution of full-term confinements taken from a

TABLE IV  
Distribution of Abortions According to Parity

Parity	1957	1958	Total	Percentage
I	121	171	292	28.92
II	93	96	189	18.71
III	81	84	165	16.34
IV	44	69	113	11.19
V	42	38	80	7.92
VI	35	25	60	5.94
More than VI	51	60	111	10.98
Total	467	543	1010	

random sample. A comparison between the two reveals that in the primigravida the incidence of abortions is significantly higher than the incidence of full-term viable confinements. With increasing parity, the incidence of abortions falls, until it becomes significantly lower than the incidence of confinements in the fifth para. With parity greater than sixth, the number of abortions again increases.



nal findings alone were relied upon. Where the patient had already passed some of the products of conception before admission, more reliance was placed on the history of amenorrhoea, as the size of the uterus was an unreliable guide in such cases.

There were some patients in the series who could not give a definite history of amenorrhoea, and who had passed some of the products before admission. Since the exact stage of pregnancy could not be judged, such cases were grouped under "Maturity unknown".

Table V and Chart 3 show the abortions grouped according to the period of gestation.

It will be noticed that the highest incidence of abortions is at or about

*Maturity*

In these cases the duration of gestation was judged from the duration of amenorrhoea and the size of the uterus on bimanual examination or either one of them.

Where a definite history of amenorrhoea was not forthcoming, the vagi-

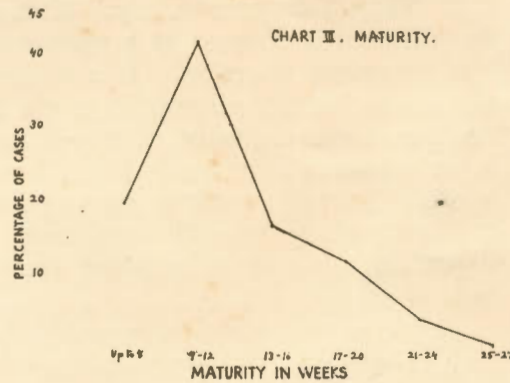


TABLE V  
Maturity

Maturity in weeks	1957	1958	Total	Percentage
Upto 8	83	118	201	19.90
9-12	193	230	423	41.89
13-16	80	85	165	16.32
17-20	62	59	121	11.98
21-24	21	19	40	3.96
25-27	—	1	1	0.10
Not known	28	31	59	5.85
Total	467	543	1010	

the 12th week (41.89%) as expected.

It is agreed by all authorities that abortions between the 9th and 12th week of gestation account for 50% of all abortions. In a statistical analysis of 1000 abortions Simons showed that about 75% of all abortions occur before the 12th week of pregnancy. In our series, 61.79% of all abortions occurred at or before the 12th week. The extremely low incidence after the 20th week is noteworthy, and is also remarked by other workers like Simons.

#### Method of Termination

The routine in our institution, as regards the management of abortion cases is as follows: As soon as a case is admitted, a vaginal examination is made. If the abortion is threatened, it is treated conservatively. If it is complete, it is classed as a spontaneous complete abortion. If any products are felt, an attempt is made to remove them digitally, if necessary, after pituitrin injection. If the evacuation fails or remains incomplete, the patient is anaesthetised and a digital evacuation or a blunt curettage is carried out.

Patients who abort after pituitrin, but who have not been evacuated

digitally or instrumentally are classified as spontaneous abortions. Patients, who require a dilatation and curettage to remove even a small bit of retained product after spontaneous abortion, are classified under operative termination.

Table VI shows the various modes of terminations of abortions.

#### History of Past Abortions

The cases of this series were analysed in the light of their past obstetric career and it was found that our 1010 patients had had a total of 1315 abortions including the past and present abortions. Then an attempt was made to find out if the patients with only 1-2 abortions in their life behaved differently, in any way, from repeated aborters. The results are shown in Table VII, which shows 1315 abortions (past and present) grouped according to maturity and according to the number of abortions each patient had.

It will be seen that in women with only 1-2 abortions 36.09% of abortions occurred in the second trimester of pregnancy. Whereas in women with a total of 3 or more abortions, 50.03% of abortions occurred in the second trimester. The conclusion is

TABLE VI  
Method of Termination of Abortions

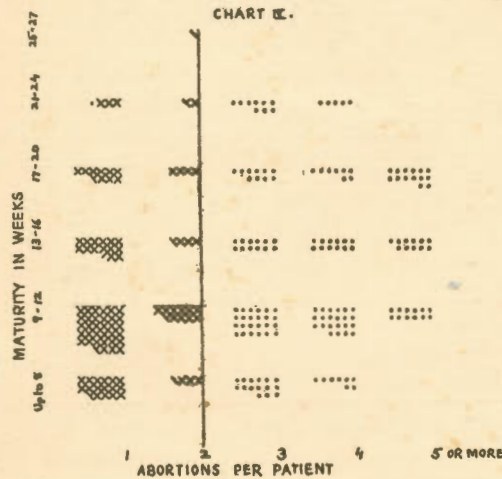
Method	1957	1958	Total	Percentage
Spontaneous ..	182	176	358	35.45
Digital ..	118	174	292	28.91
Dilatation & curettage ..	159	181	340	33.66
*Otherwise ..	8	12	20	1.98
Total	467	543	1010	

\* Patients discharged against medical advice as incomplete abortions.

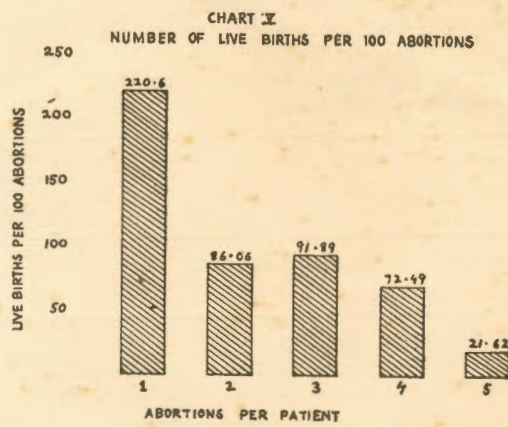
TABLE VII

No. of abortions per patient	1	2	3	4	5	More than 5
No. of patients	807	140	37	20	4	2
Maturity in weeks						
Upto 8	167	34	15	8	—	—
9-12	335	109	24	22	7	5
13-16	142	37	12	12	11	—
17-20	97	40	10	8	2	12
21-24	31	13	9	5	—	—
25-27	—	4	1	—	—	—
Unknown	35	43	40	25	—	—

(Table VII is graphically represented by Chart 4).



viable births were grouped according to the number of abortions per patient. It was found that patients with only one abortion had relatively



that repeated aborters tend to abort late in pregnancy. This is shown in Table VIII.

TABLE VIII  
Tendency of Repeated Aborters to Abort Late in Pregnancy

	Total abortions in the group	Abortions in		
		First trimester	Second trimester	
Patients with one or two abortions	1009	645	364	36.06%
Patients with three or more abortions	163	81	82	50.03%

*Viable Live-births*

1010 patients in this series had a total of 2189 viable live-births. These

a much greater number of viable births than repeated aborters. Table IX and Chart 5 show the proportion of viable births to abortions in each

group of patients with 1, 2, 3 abortions and so on. rhage and shock.

Table X shows the incidence of complications in our series.

Table XI shows other incidental diseases of the mother which may have been responsible for producing the abortion.

### Mortality

There were 2 deaths out of 1010 cases. Both were due to haemor-

### Acknowledgment

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TABLE IX  
Ratio of Abortions to Viable Live-births

No. of abortions per patient	1	2	3	4	5 and more
Live-births	1780	241	102	58	8
Abortions	807	280	111	80	37
No. of live-births per 100 abortions	220.6	86.06	91.89	72.49	21.62

TABLE X  
Complications

Complications	1957	1958	Total no. of cases
1. Septic abortion	18	19	37 (3.65%)
(a) Septic abortion with parametritis	—	2	
(b) Septic abortion with peritonitis	—	1	
(c) Criminal septic abortions	1	1	
2. Missed abortion	1	1	2
3. Multiple pregnancy	2	1	3
	(twins)	(triplets)	
4. Shock-collapse	2	8	10

TABLE XI  
Incidental Diseases of the Mother

1. Congenital anomaly of the generative tract	..	..	..	..	2
(a) Arcuate uterus	..	1			
(b) Septate vagina	..	1			
2. Haemorrhagic small pox	..	..	..	..	1
3. Extensive burns	..	..	..	..	1
4. Cardiac disease—mitral heart with failure	..	..	..	..	1
5. Traumatic with post-coital vaginal tear	..	..	..	..	1

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