A STATISTICAL SURVEY OF PROLAPSE OF THE UTERUS IN RELATION TO PARITY AND AGE

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In this short paper, a statistical survey of two hundred and seventeen consecutive cases of prolapse of the uterus in relation to age and parity is discussed. These were cases presenting themselves, admitted and treated in the gynaecological ward of the Osmania Hospital, Hyderabad, during the years 1951-54 by my colleagues and myself. Cases with actual descent of the uterus are dealt with, to the exclusion of other pelvic floor defects unaccompanied by descent like simple cystocele and rectocele. Nor does it include cases of so-called prolapse — the congenital hypertrophic elongated cervix. One may mention that there were 17 of these types of cases (all nulliparae) along with 217 cases under review — an incidence of 7.8% of all cases of prolapse. The usual classification of the first, second and third degree of descent of the uterus is observed.

In passing, it should be made clear that while discussing the age incidence, what is made available is only the age of the patient at the time she sought admission and to that extent naturally vitiates statistically the time of damage to the pelvic floor producing the prolapse. This applies more so in cases of the first degree of prolapse. Seldom does a patient present herself with this condition as her leading complaint, and it is observed only during a routine gynaecological examination made for a related or an unrelated complaint. Again, those cases of procidentia, presenting themselves much later in life when the condition has become almost unbearable, in no way could be treated as giving us a correct age incidence. Also, I have been more or less driven to adopt a quinquennial age-grouping, for the admission clerks of the hospital seem to have adopted this grouping automatically in judging age of patients in the nearest five year group (for it is notorious patients seldom give their correct age). The same vitiating influence has to be noted in studying the parity relationship. This time-gap of the actual aetiological factor and the cases presenting themselves for treatment must always be kept in mind. Whilst considering this latter question of parity for purposes of this paper, I have somewhat arbitrarily limited the reproductive age to 45, and lumped together all the cases at much later age-groups as incidental to the time point,

In spite of these rather inescapable deficiencies, which I am afraid is common to all the workers in this country, certain salient points present themselves which are worth study and are presented in this paper. I must also mention that I have used for comparative statistics, wherever that may be of profit for our purpose, a study of five hundred child-births occurring in the obstetric wards of our Hospital.

It has been very difficult to assess the incidence of prolapse as such against the population or against the total number of child-births or total number of mothers. To have some idea, I have used the only available data, total child-births during this period in the hospital. Naturally it does not guarantee that all of them are so many different mothers, nor a logical sequence of one following the other, but still does give one an idea. Also it must be noted that though various other institutions cater to the child-birth care of the surrounding area, there are very few other hospitals caring for these types

of cases — prolapse. Hence these patients are drawn from a very much larger geographical area, almost the whole State and the comparative figure of incidence is bound to be very high. For every 1000 child-births in this hospital 12.5 cases of prolapse present themselves. Again, I would stress, this is only a parallel statement and cannot be pushed further. Half these figures (six prolapse incidence for thousand child-births) probably represent a more correct picture even though this figure, one should state, is enormously high.

Age Incidence.

In this series, the youngest patient was seventeen years old — a primipara with a first degree prolapse. The oldest age group noted is 80-85 with a round dozen cases of procidentia. So it seems prolapse is a condition met with at all ages of the sexual life of a woman and naturally persisting long after. Table I gives the incidence and number of cases of the different degree of prolapse at different age periods and parity.

Age Group	Age Icidence			Parity Incidence			Parity
	1st°	2nd°	3rd°	1st°	2nd°	3rd°	
20-24	11	6	4	8	24	15	1st para
25-29	9	11	7	7	14	13	2nd „
30-34	8	34	24	9	6	14	3rd „
35-39	1	11	10	3	10	12	4th „
40-44	0	9	9	2	12	9	5th „
45-49	3	6	8	3	5	8	6th „
50-54	0	4	21	2	4	14	7th „
55-59	0	1	4	1	3	3	8th „
60-69	0	2	9	1	5	5	9th „
80	0	0	5	1	1	1	10th „
				0	0	1	11th „
				0	0	1	12th „
	Total	..	217		Total	..	217

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The age incidence of all cases of prolapse is shown graphically in diagram I.

I have presumed to call this graph a "Medical Saddle with a high fore-peak". A glance at it would indicate the very high peak indeed (76 cases) at the seventh quinquenium of life followed by a much smaller rise at over 50 years. This picture is in some ways disquieting. One naturally takes it for granted that the more severe degree of prolapse is a disease of old age or at least post-menopausal. But here we are with more than half the number of cases, 51% as shown in the insets, occurring at what may be termed the prime of life.

That this does give the correct picture of the state of affairs is again .seen when one turns his attention to the second diagram.

These graphs respectively give the age incidence of the three degrees of prolapse separately. Each of them carry individually the Me-xican Saddle type through varying intensities. The cases of first degree prolapse start straightaway with an early age, high incidence in the twenties. Then with a rather inconspicuous rise at the menopausal period it fades away as it is to be expected. We will have an opportunity to refer to the high early age incidence of this type of prolapse again when we discuss the parity of these cases. The later fading away may be explained by this grouping finding its way to the more severe types. This is especially to be noted at about the age of thirty. It cannot but be noted that thirty seems to be quite a crucial age in this study by all accounts. Whereas the other two degrees of prolapse show their highest incidence at this age, the first degree starts a steep decline in occurrence and continues to do so, except for a small rise at 45.

Cases of second degree prolapse start with a moderate incidence in

1st DIAGRAM
AGE INCIDENCE OF ALL PROLAPSE CASES

2ND DIAGRAM
AGE INCIDENCE OF PROLAPSE
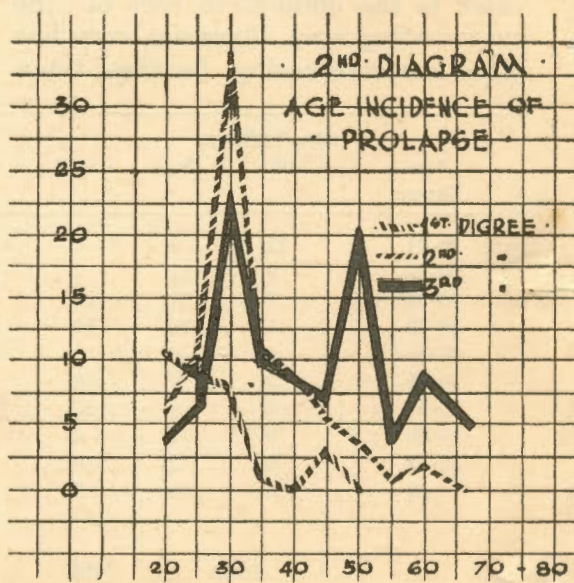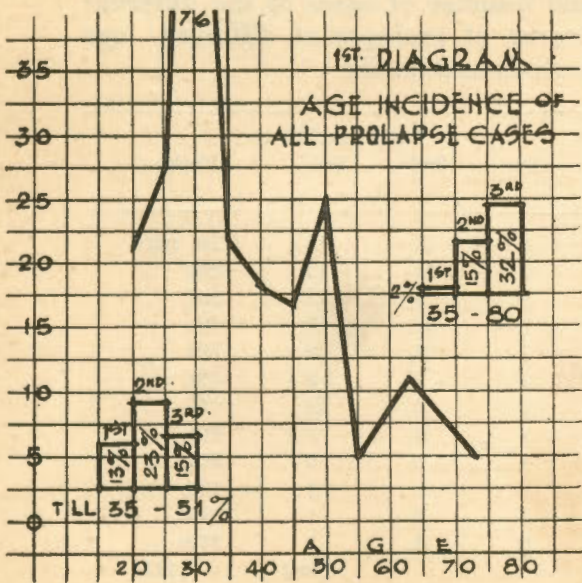
the early ages, reaches its very high peak at about 30 and thereafter shows a sharp decline—fades away very much like the first degree. Though the latter part of this graph resembles that of the first degree, the fore-peak of the saddle is different in two important aspects. Early age incidence is much lower and the peak incidence at 30 is much higher than of the first degree and here resembles the third degree graph.

The third degree graph lends more true to type of the Mexican Sadddle. Starting with the lowest early age incidence it sustains a peak at 30, settles down to rise to an almost similar peak at about 50, declining more or less gradually thereafter. If one can forget the forepeak of this graph, the classical concept of incidence of prolapse as a condition of later life resulting from repeated insults to the pelvic floor by repeated childbirth, can well be sustained. But there is forepeak in all graphs and

a very prominent one too. For an explanation, we have to look further afield.

To some extent a consideration of the fecundity at different ages throws some light on this abnormal incidence at early ages.

This graph gives the age fecundity of cases of prolapse, control and also a graph of age incidence of prolapse for comparison. The graph indicates, of 100 children born, the number of children at each group of the mother. Thus there are 33 children amongst the controls of mothers aged 15 to 20. In this group at the age of 30-35, ninety-six of the 100 children have been born i.e. the vast majority — to the extent of 95% are born by 35 years of age of all mothers—which also represents the forepeak of our Mexican Saddle. The age fecundity of cases of prolapse also reaches a peak at this crucial age, but only 62% of the babies are born by this time, of mothers with
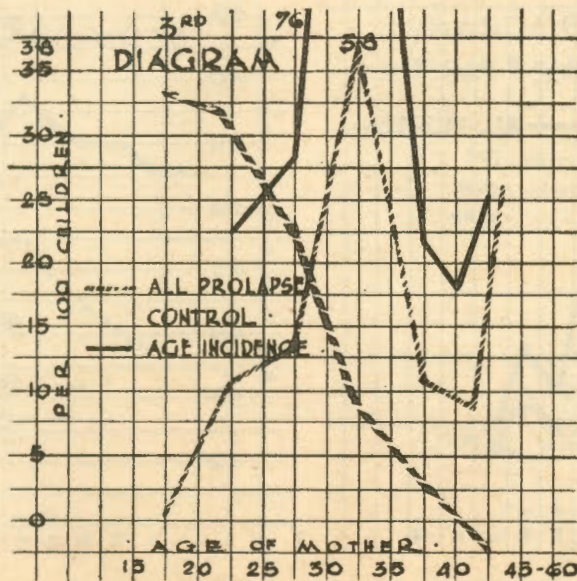
prolapse. Of this more anon. Also the age fecundity graph of prolapse has a close resemblance to the fore-peak of the Mexican Saddle though its configuration is very different to the control-age fecundity graph.
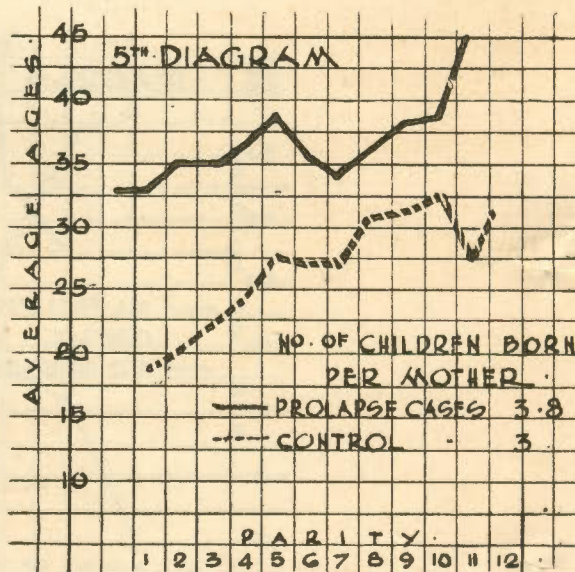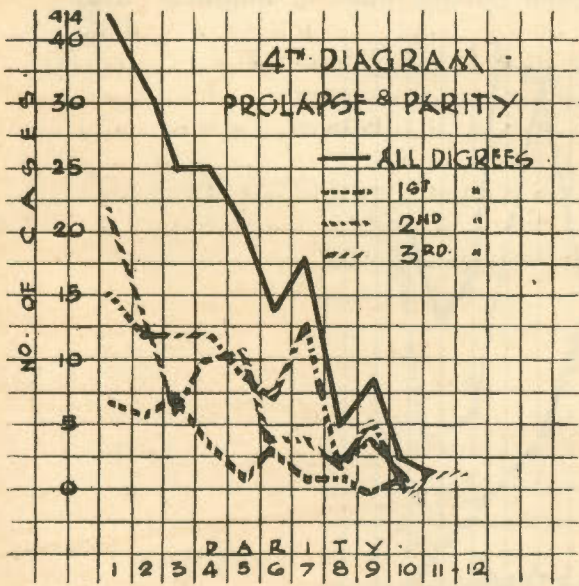
So, one may argue that the large majority of children are born before a mother is thirty, and prolapse is very high at about this age. But that is not all.

A consideration of the parity incidence of cases of prolapse shows a very different and disturbing picture and certainly not in consonance with the classical idea of prolapse as being relegated almost to geriatrics.

The most striking feature is the very high incidence, 22%, amongst primiparas. More than half the cases, 50.5%, occur as early as the first three children, the grand multipara escaping with a very much lower incidence indeed. The graph of first degree cases of prolapse preserves

its usual characteristic of starting high at an early age and then tailing off. The second degree starts off with a much higher incidence, makes but an abortive attempt at a second peak and behaves otherwise as the first one. The providentia cases on the other hand have an incidence of 7.5% for primiparas, shows a second rise for seventh paras and dominates among the grand-multiparas. This picture throws into relief and drives us to the conclusion that repeated pregnancies, while they have their effect on accentuating the defect, the real insult to the pelvic floor is really sustained at the time of the first parturition.

This diagram shows the average age at each parity of the cases of prolapse as well as the control. Amongst the controls, primiparas have an average of 19. By the age of 30-35, they have borne eight children. The graph of the cases of prolapse is in-

4ᵀʰ DIAGRAM
PROLAPSE & PARITY
— ALL DEGREES
----- 1ˢᵗ "
----- 2ᴺᴰ "
--- 3ᴿᴰ "

PARITY
1 2 3 4 5 6 7 8 9 10 11 12

5ᵀʰ DIAGRAM

NO. OF CHILDREN BORN PER MOTHER.
— PROLAPSE CASES   3·8
---- CONTROL   3

PARITY
1 2 3 4 5 6 7 8 9 10 11 12

structure. Here the average age of the primiparas is very high indeed, in fact 33. Thereafter the curve is much flatter suggesting that in these cases, the reproductive age-period starts much later than normal and also continues much longer. The question then arises whether late reproductory age is cause or effect. Evidence seems to be in favour of late child-bearing age being an aetiological factor. The late primiparas in this group seem to clinch the question.

Again, we could seldom get history of instrumental labour. No statistics are available on this point. In fact, one can assume that judicious instrumental or other assistance would go a long way to reduce the incidence of prolapse. An interesting side-light is that the occurrence of prolapse in a woman nowise reduces the number of children borne by her. The average number of children borne by mothers with prolapse in this series is 3.8. The corresponding figure for controls is 3.7. There follows an intriguing corollary. We know that all cases of prolapse are preceded and accompanied by retroversion of the uterus. This seems to have no effect on their fecundity — if any, these figures seem to show that they are more fecund! Still we do perform operations by the legion for correcting retroversion as a cure for sterility.

A study of this series of cases would lead one to the following conclusions:—

A. Prolapse is not at all a condition of old age as one is lead to expect; 51% of cases occur between 30 and 35.

B. 22% of all cases of prolapse occur in primiparas and more than half by the third child.

C. So it is not repeated child-birth that leads to prolapse but probably the damage to the pelvic floor at the very first parturition.

D. Child-birth at a later age, especially for primiparas (33), makes the mother more susceptible to pelvic floor damage.