

The Grande Multipara in Obstetrics

by

T. H. Lean MB, FRCS (G), FRACS, FRCOG.

KANDANG KERBAU HOSPITAL, SINGAPORE.

There is as yet no universally accepted definition of the term "Grande Multipara" and opinions in the world literature are divided as to the parity required to be reached to qualify as a Grande Multipara. French literature puts the parity as more than five and American sources regard parity seven as the earliest grande multipara. A majority of British authors feel that grande multiparity should be applied to any woman who have had 5 or more viable pregnancies. It has been the decision in this survey at this Hospital to label a woman—parity 5 and over as a Grande Multipara. Feeney in Ireland has on record women reaching the 20th and 21st pregnancy and in Ireland, the term of a grande multipara is restricted to women carrying their eight pregnancy and over.

In 1934, Bethel Solomons focussed dramatic interest on the 'group of women called "the grande multipara" and pronounced that "it is

altogether a mistake to suppose that in child-bearing, practice makes perfect." Far from this, such a group was termed the "Dangerous Grande Multipara" as the patients are liable to a series of dramatic complications—all the more dangerous, because the complications are often unsuspected. It is on this group of mothers and their obstetric behaviour in pregnancy and labour that interest is centred on, and the study forms the bulk of the lecture which will be presented to you this afternoon.

Incidence

As stated in the introduction, because there are variations in the definition of a grande multipara, the incidence cannot be truly compared, but it is worth the while to show the variations in incidence in the respective countries using their respective definitions.

TABLE I

Incidence—Grande Multiparity

Author	Definition	Incidence
Israel & Blazar U.S.A.	Para 7 & over	5551 in 128568 <u>4.3 per cent</u>
Fenney IRELAND	Para 8 & over	518 in 4115 <u>12.6 per cent</u>
Kandang Kerbau Hospital SINGAPORE (1964)	Para 6 & over	11162 in 39598 <u>28.2 per cent</u>
	Para 7 & over	8251 in 39598 <u>20.7 per cent</u>
	Para 8 & over	5735 in 39598 <u>11.4 per cent</u>

It is the intention to show in some details—the distribution of these cases at the Kandang Kerbau Hospital according to race and age.

TABLE II

Race	Nos.	% Series	% Total
Chinese	10,827	75.6%	35.5%
Indon-Malays	2,495	17.4%	46.6%
Indians	987	7.0%	25.9%

TABLE III

AGE DISTRIBUTION

Age Group	Nos.	Per Cent
25-30 years	3,948	27.5%
31-35 years	4,670	32.6%
36-40 years	3,069	21.4%
Over 40 years	1,069	7.2%
Below 25 years	1,623	11.3%

TABLE III (A)

**Grande Multiparity
Kandang Kerbau Hospital
AGE DISTRIBUTION BY RACE**

Chinese (Total 10827)		
Below 25 years	1,016	9.4%
25-30 years	2,741	25.4%
31-35 years	3,693	33.3%
36-40 years	2,469	22.9%
Over 40 years	918	9.0%
Indon-Malays (Total 2,495)		
Below 25 years	427	17.0%
25-30 years	814	32.6%
31-35 years	695	27.9%
36-40 years	447	17.5%
Over 40 years	122	5.0%
Indians (Total 987)		
Below 25 years	180	18.3%
25-30 years	343	34.8%
31-35 years	282	28.5%
36-40 years	153	15.5%
Over 40 years	29	2.9%

Observations on the obstetric behaviours

1. Maternal Mortality

Bethel Solomons called this particular group of patients the "dangerous grande multi-

para" because the striking single fact that emerged from the study was the elevated maternal mortality associated. Since then—opinions have been most unanimous on this aspect. Thus for example, Solomons noted that the maternal mortality increased steadily from the 5th to the 10th pregnancy and the risk of death for para 10 was 5 times that of an average woman. Eastman observed that for para 9 and above, the risk of death was 3 times greater than that of women of lesser parity. In England and Wales, the 1940-45 survey showed the rate for para 10 and over at 6.33 per thousand which was about 2½ times that of a primigravida. At the Kandang Kerbau Hospital, studies on maternal mortality show that the risk of a mother para 6 and over was 5 times higher than women with 5 pregnancies and less. A total of 117 women out of 208 maternal deaths during the years of 1955 to 1962 were lost and this was 51.5% of all deaths that had occurred for the same period. Ante-Partum haemorrhage, post-partum haemorrhage and complications of Toxaemia of Pregnancy were the main causative factors of death for this group under review.

TABLE IV

**Grande Multiparity
Kandang Kerbau Hospital
MATERNAL DEATHS**

Source	Rate
Solomons	For Para X and Over
IRELAND	Rate was TEN (10) the average
Eastman	For Para 9 and above
U.S.A.	Risk was THREE (3) times the average
ENGLAND & WALES	For Para X and Over
1940-45	Rate—6.33 per 1000
SINGAPORE	Risk—2.5 times of average
K.K. Hospital	117 deaths out of total 208 (51.5 per cent)
1955 to 1962	Risk—FIVE (5) times higher than Para 5 and less

MAIN INCRIMINATING FACTORS OF DEATH

Haemorrhage	Ante-Partum Post-Partum
Toxaemia of Pregnancy		

2. Foetal Mortality

The pattern of foetal mortality show a somewhat similar curve in cases associated with grande multiparity. Thus for example in Barn's series—the foetal mortality rose from 38.9 per 1000 for primigravida to 73.4 per 1000 in deliveries amongst para X and over—about 2 times. Eastman also showed that the still-birth rate was doubled amongst the deliveries of para X and over. At the Kandang Kerbau Hospital—related figures are shown in Table V.

TABLE V
Grande Multiparity
FOETAL MORTALITY

Series	Rate
Barns (UK) Para 1-38.9 per 1000 Para 10 & Over—73.4 per 1000
Eastman (USA) Still-Birth Rate was double for Para 10 & Over as compared with Rate for lesser parity
K.K. Hospital (1964) Still-Birth—219 cases 14.9 per 1000

Analysis will show that the higher incidence of obstetric complications like ante-partum haemorrhage, toxæmia of pregnancy, and labour complications requiring increased obstetric interference as well as Prematurity provides the bulk of the factors accounting for the higher foetal mortality.

3. Anaemia and Grande Multiparity

Oxorn has described the pluriparous woman as a “woman who has borne more than her share of children” and she is an “obese, overtired, hypertensive woman with poor muscle tone and a tendency towards Anaemia.” The bulk of the anaemia associated is the iron deficiency anaemia. In the American series, anaemia occurred as 29.7 per cent amongst the grande multipara as compared to 14.7 per cent amongst those of lesser parity. It was also

shown that the Negro woman had far more anaemia than the white woman before reaching grande multiparity; and grande multiparity in white women dramatically heightened the incidence of anaemia amongst them. The relationship of Anaemia amongst the grande multipara at the Kandang Kerbau Hospital are as shown in Table VI.

There is no doubt that socio-economic factors are responsible for this state of affairs. Most of the patients probably are never given a chance to regain a good blood picture and Anaemia probably dog them from one pregnancy to another without any respite. In their busy life looking after the welfare of their many children, they neglect their own nutrition—suffering a general lack of Iron, vitamins and first class proteins.

4. Toxaemia of Pregnancy

This condition is classically most common amongst the younger primigravida and it has been the observation that the Grande Multipara is also at risk regarding Toxaemia of Pregnancy but the incidence of this condition and eclampsia is really no more higher in the Grande Multipara—despite the increased incidence of Hypertension per se amongst such patients.

This latter fact is no doubt due to the fact that advancing age in a Grande Multipara has a definite role in increasing the incidence of Hypertension per se.

The incidence of Toxaemia of Pregnancy amongst the grande Multipara at the Kandang Kerbau Hospital are as tabulated in Table VI. The important point to be aware of is the fact that the complications of Toxaemia and eclampsia amongst the grande Multiparous patients are probably more serious and the mortality rate from these complications will be raised because these patients are less well equipped than the younger and less parous women to contend with them. Such complications include Hypertensive encephalopathies and renal failures as well as hypertensive heart failure.

5. Haemorrhage Complications

There is general appreciation that there is a significantly greater incidence of the haemorrhage—inducing disorders of pregnancy among-

gst the grande multiparas. Bieniarz explained that high parity leads to augmentation of the venous drainage from the lower portion of the uterus, and lower placentation, creating the propensity for abruption placentae and placenta praevia. The former was more common than the latter. The related figures for the Kandang Kerbau Hospital and the American series are presented in Table VI.

There is no doubt that both these conditions, their complications and the increased obstetric interferences required, will increase both maternal and foetal hazards. Maternal mortality and morbidity will increase in incidence as will foetal mortality and morbidity.

Post-Partum Haemorrhage is another realistic danger that the grande multipara will have to face. The condition is more likely to be due to poor uterine contractility and relative atonia of the parturient uterus in a grande multipara.

In the American series presented, the incidence at 5 per cent is double that in women with lesser parity and at Kandang Kerbau Hospital, Post-Partum haemorrhage accounted for 42 deaths at the Kandang Kerbau Hospital during the 8 year period (1955 to 1962) and this represented 20.19 per cent of all deaths under review. It is quite obvious and much has been written about the virtue of giving prophylactic Ergometrine or Syntometrine during the second stage of labour of a grande multipara.

It is also worthwhile advice to have ready availability of matched blood for all grande multiparas in labour as post-partum haemorrhage in such patients is sometimes very sudden and dramatic.

Post-Partum haemorrhage is not only due to inefficient uterine action per se but can be caused by ruptured uterus. Nelson and Sandmeyer has shown that the combined effects of

TABLE VI
Grande Multiparity
Kandang Kerbau Hospital
ANTE-LABOUR COMPLICATIONS

Condition	Nos.		Per Cent
a) ANAEMIA: USA		Grande Multip	29.7%
		Lesser Parity	14.7%
	KKH		0.25%
b) TOXAEMIA: KKH	571		3.9%
c) HAEMORRHAGE:			
1. Abruptio Placentae			
	USA		1.9%
	KKH		0.75%
2. Pl. Praevia			
	USA		1.04%
	KKH		0.98%
3. Post-Partum			
	KKH—	42	maternal deaths
			1955 to 1962
	KKH—	881	cases (1964)
			20.19%
			5.5%
4. PPH—			
Ruptured Uterus			
	USA	—Incidence is 3 times that of Lesser Parity	
	KKH	—12 fatal cases (25 per cent) out of 48 cases during 1955-1962	

sparser myometrial fibres, increased hyalinisation of blood vessels as well as a poorer supply of elastic tissue make a grande multiparous uterus more prone to rupture during labour—especially a neglected labour. The incidence is increased about three times in the American series, and at Kangang Kerbau Hospital, 12 out of 48 fatal cases (25 per cent) of post-partum haemorrhage were due to ruptured uterus. In 1964—1 case of ruptured uterus was reported resulting in 1 death.

6. Labour Complications

There are 2 major aspects of complications in the labour of a grande multipara that require significant attention. The first is the aspect of Abnormal Presentations and the second concerns the increased operative treatment required during delivery.

Malpresentations

There was a total of 537 cases in 11162 grande multiparous pregnancies (4.8 per cent) with malpresentations, including 114 twin pregnancies and 3 triplets. The breakdown of these malpresentations are as shown in Table VII.

The Caesarean Section Rate did not appear to be increased in the series at K.K. Hospital being at 2.3 per cent and the Forceps and

TABLE VII

Grande Multiparity Kandang Kerbau Hospital

LABOUR COMPLICATIONS

	Nos.	Per cent
a) Malpresentation		
1. Breech	365	2.45%
2. Transverse	21	0.17%
3. Face	5	0.04%
4. Unstable lie	4	0.03%
5. Cord Present	25	0.18%
6. Twins Pregnancy	114	0.80%
7. Triplet	3	0.02%
b) Forceps and Vacuum Deliveries	78	0.5 %
c) L.S.C.S.	339	2.3 %

Operative Obstetric

Vacuum Delivery rate at 0.5 per cent was much below the average for the hospital in general. It is the observation that perhaps grande multiparous patients at K.K. Hospital deliver their babies much easier from a mechanical point of view.

Concluding Remarks

From the array of information provided, I would like to end this talk by allusion to a contention that perhaps Bethel Solomons was only correct in the designation of a "Dangerous Grande Multipara" for the 1930s. Over the past two decades, tremendous advances have been made not only in general medicine but also in Surgery and definitely Obstetrics. Today—obstetricians begin to class the grande multipara as a "Burdened Multipara"—implying that there are accepted, the propensity for this group of patients to develop complications much more easily than her other counterparts—but that under improved conditions of present-day obstetrics, the risk to life of a grande multipara need not be appreciably increased. However, it is wise to heed wise words of OXORN who says:

"There must be no sense of false security or no neglect. Every patient must be thoroughly examined and carefully followed throughout the course of pregnancy, labour and puerperium."

References

- Barns, T., *Edin. Med. J.* 60:28: 1953.
 Biernaz j: *Am. J. Obst. & Gynec.* 78:399: 1959.
 Eastman, N., *N.Y. St. J. Med.* 40: 1708:1949.
 Feeney J.R. *J. Irish. Med. Assn.* 32: 36: 1953.
 Israel, S.L. and Woutersz, T.B. *Am. J. Obst. & Gynec.* 85: 659: 1963.
 Israel S.L. and Blazar A.S., *Am. J. Obst. & Gynec.* 91: 3: 1965.
 Israel S.L. and Deutschberger J., *Am. J. Obst. and Gynec.* 24: 411: 1964.
 Nelson J.H. and Sandmeyer M.W., *Am. J. Obst. and Gynec.* 75: 1262: 1958.
 Oxorn H. *Obst. & Gynec.* 5: 150: 1955.