Understanding of current obstetric formula:how much appropriate?

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ABSTRACT *Objective:* To evaluate understanding of obstetric formula and the doubt regarding terminology of obstetric formula amongst medical students and nursing staff .

Design : Questionnaire based cohort study

Setting: Hospitals of Jawaharlal Nehru Medical College , sawangi (meghe) wardha

Sample: 500

Methods: After taking approval from institutional ethical board five hundred questionnaires were handed out to medical students and nursing students in all the hospitals of Jawaharlal Nehru Medical College.

Outcome Measures: Majority of students are confused regarding the understanding of GPAL formula and addition of D in the obstetric formula

Results: By this study it was noted that there was a significant amount of misunderstanding about the obstetric formula among the medical students and medical nursing staff.

Conclusions: There is a precise need for a better obstetric formula which can help in better improving the understanding of the terms 'gravida' and 'parity 'in medical students and nursing staffs and hence help in proper assessment and management.

Introduction:

Obstetric history of pregnant women is described in standard text book by formula G,P,A,L. Here G stands for gravida, P stands for parity,   A stands for abortion, L for living issues. There is a lot of confusion regarding the understanding of terms used in this obstetric formula especially with previous twin delivery, mid trimester abortion and dead babies.

Some textbook refer parity for viable deliveries[1] and some for viable pregnancies[2] . Parity in twin pregnancy is also poorly understood.[3]Similarly L for present living issues or L for live births. Similar problem was appreciated worldwide[4,5].

Hence we conducted a survey to assess the degree of confusion regarding conflict in literature, usage of these terms amongst medical students and nursing students , evaluating the interpretations of these terms in relation to previous singleton as well as multiple pregnancies.

Method:

After taking approval from institutional ethical board , five hundred questionnaires were handed out to medical students and nursing students in hospitals of Jawaharlal Nehru Medical College.

We have formulated five hundred questionnaire regarding knowledge of gravida , parity ,abortion and living births .Candidates were divided into two groups with respect to knowledge of each question asked ,

1. **Gravida – groups were divided as**
A. appropriate understanding (knowing)
B. inappropriate understanding (not knowing)

2. **Parity- groups were divided as**
A. candidates who were aware (total no. of pregnancies with delivery after viability)
B. candidates who were unaware (total no.of pregnancy crossed viability including present pregnancy)

3. **Parity in twin - groups were divided as**
A. candidates who considered parity as one
B. candidates who considered parity as two .

4. **Abortion- groups were divided as**
A. Candidates who considered abortion before viability(i.e. before twenty weeks)
B. Candidates who considered abortion before viability (i.e. before twentyeight weeks)

5. **Living - groups were divided as**
A. Candidates who considered live births as living.
B. Candidates who conidered number of present living children as living .

6. **Dead – groups were divided as**
A. Candidates not considering 'D' in obstetric formula
B. Candidates not considering 'D' in obstetric formula
So the following questionnaire was made which consisted of the suitable questions which helped me to look into the various confusion within all the candidates to whom I interviewed.

Questions were as such :

- Define gravida ?
- Define parity eg.candidate who is pregnant for the first time beyond viability and in a candidate who is pregnant for the second time after giving birth beyond viability?
- Parity in twin pregnancy after her 1st delivery is considered as ?
- How to include live birth and no. of living babies , Like for eg. Twenty four year old candidate who was pregnant , delivered a female baby of 2.4 kg by 34 weeks but died after 1 week , what will be her obstetric formula ?
- Finally a simple logical question , A thirty four year old lady is currently pregnant, She has four year old twins and a two year old son who was d elivered preterm and died. In this lady's hospital file, you will find gravida _____ and para ____.

Result:

Five hundred candidates were interviewed out of which majority 350 were medical students and remaining 150 were staff nurses.

All the five hundred candidates were interviewed based on the questions mentioned previously and the following results were obtained (Table .1), 77.7 % knew what was gravida and the remaining failed to define gravida. When it came to parity, there were around 74 % of candidates who considered total no. of pregnancy crossing viability including present pregnancy and remaining 26%only considered total no. of pregnancies with delivery after viability .When it came to considering parity in term of twin pregnancy , there was only 19.4 % considering parity as 1 and 80.6 % considering parity as 2 .In case of abortion , 99.6 % considered abortion before 20 weeks and 1.4% considered abortion before 28 weeks.

In terms of living 31 % considered live births as living , even if babies may had died later anytime and 69 % considered present living issues only. 81 % did not consider death since it was not mentioned the textbooks.

Table. 1. DISTRIBUTION OF CANDIDATES ACCORDING TO THEIR KNOWLEDGE REGARDING DIFFERENT TERMINOLOGY

Sr No.	Terms	Groups (A&B)	No. of Candidates / 500 (Total no. of candidates)	Percentages
1	GRAVIDA	A. knowing	389	77.8%
		B. Not knowing	111	22.2%
2	PARITY	A .unaware(Total no. of pregnancy crossed viability including present pregnancy)	370	74%
		B. Aware (total no. of pregnancies with delivery after viability)	130	26 %
3	PARITY IN TWIN PREGNANCY:	A. AWARE (considering parity as 1)	97	19.4%
		B.UNAWARE(considering parity as 2)	403	80.6%
4	ABORTION	A : People who considered abortion before 20 weeks [1]	498	99.6 %
		B: People who considered abortion before 28 weeks (according to WHO)	2	1.4%
5	LIVE	A : considering live births as living	155	31%
		B : considering living issues at present only	345	69 %
6	DEAD	A.Candidates not considering 'D' in obstetric formula	405	81%
		B.Candidates not considering 'D' in obstetric formula	95	19%

Discussion:

As per previous studies , purpose of including this information at the beginning of a discussion was for woman's care ,to provide a quick context of the patient from a reproductive standpoint3.Unfortunately, the systems in use for describing gravidity, parity, and reproductive outcomes are without clear epidemiologic, biologic, or clinical basis[3].

As per other studies done ,accurate documentation is important in clinical risk management and involves a comprehensive understanding of the medical terms used. Incorrect interpretation and application may have serious medico-legal implications.[4]In addition, a woman's obstetric history is vital to the management of her future pregnancies. Its usage in multiple pregnancies is widely misunderstood as has been shown clearly in this study. The misunderstanding affects all grades of obstetricians and midwives. A literature search did not yield any previous studies evaluating the meaning and clinical application of the word parity in previous twin delivery[4].

And there were other studies, which was found that there was a significant confusion regarding the definitions of the terms ''gravidity'' and ''parity'' among obstetricians and midwives . Standardization of these definitions is important in clinical risk management and will help to improve accuracy and uniformity in documentation.[5,6,8,9]

Oxford medical defined parity as 'a term used to indicate the number of pregnancies a woman had that have each resulted in the birth of an infant capable of survival'. It further explains a multipara as a woman who has given birth to a live child after each of at least two pregnancies[5,6,8,9]

On historical principles, oxford defined the word 'birth' as 'the bearing of offspring, giving birth e.g. two children in one birth'. By this, delivering two babies in a twin pregnancy is one birthing process or one birth. Therefore, the number of babies from a single birthing process does not affect the parity count.[5,6,8,9]

Similarly in our study majority of students are confused regarding the understanding of GPAL formula and addition of D in the obstetric formula.

Conclusion:

Although it was a short study , it clearly indicates the precise need for a better obstetric formula which can help in better improving the understanding of the terms 'gravida' and 'parity' in medical students and nursing staffs and hence help in proper assessment and management**.**

Disclosure of Interests:
There are no conflict of interests that I should disclose.

Contribution to Authorship:
Firstly , my complete study design , as well as how to go about with my study was bought about by my profes-sor, **Dr. Deepti Shrivastava , Professor of Obstetric and Gynaecology in Jawaharlal medical college ,sawangi (meghe)** , later my data was analyzed by my senior resi-dent **Dr. Juhi Papalkar, Resident of Obstetric and Gy-naecology in Jawaharlal medical college ,sawangi (meghe)** and lastly I , **Dr.Moushmi .S. Rao , Resident of Obstetric and Gynaecology in Jawaharlal medical college ,sawangi (meghe)** contributed in providing the materials, further analysis of study ,performing the study by interviewing 500 candiates individually (medical stu-dents and nursing staff) and at the end, finally presented it as a paper at AICOG 2012 along with my professor , **Dr. Deepti Shrivastava , Professor of obstetric and gy-naecology in Jawaharlal medical college** .

Details of ethics approval :
The Institutional Ethics Committee in its meeting held on 2/3/12 had approved the following research work pro-posed to be carried out at hospitals of   J.N MEDICAL COLLEGE , sawangi (meghe), wardha.

This approval has been granted on the assumption that the proposed work will be carried out in accordance with ethical guidelines prescribed by Central Ethics Committee on Human research (C.E.C.H.R)

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