Snippets from the Quarterly CRMD meeting held on 12/12/21 at TOGS Academia , Thrissur.

29 cases of maternal deaths were discussed maintaining absolute anonymity. The causes are given in the following table. It is clearly seen that COVID has surpassed all other causes of maternal deaths

Cause	**Number**
COVID pneumonia	8
PPH	5
Hypertensive disorder	4
Suicide	2
RTA	2
AFLP	1
Sepsis	1
AFE	1
Placenta accreta spectrum (PAS)	1
Aorta dissection	1
SLE vasculitis	1
Unknown	3

We analysed each of these deaths and subcategorised into the following :

TYPE OF DELAY	**NUMBER**

1.Delay from the part of patient and family	3
2.Delay in reaching the institution	3
3.Delay after reaching the institution	9
4.No delay identified	7
5.Cannot comment	7

AVOIDABLE OR NOT	**NUMBER**
1.Unavoidable	7
2.Avoidable in an average medical setting	7
3.Avoidable only in the best settings	9
4.Cannot comment	6

Observations : A 36 year old G5P1L2A3, Previous LSCS , low lying anterior placenta detected from first trimester. ANC from a private hospital. She got admitted at 36+1 weeks , on 23/7/20 at 10 am with bleeding PV. Emergency LSCS done from the private hospital . Placenta accreta. Could not control bleeding. Uterus and abdomen closed. Patient had cardiac arrest. Revived and shifted to a higher centre accompanied by the Gynaecologist. On arrival in the

ED, patient again had cardiac arrest, revived , relaparotomy done , abdominal aorta clamped. She expired at 12:36 pm on 23/07/20.

Recommendations : Low lying placenta in a case of previous LSCS in the first trimester is a red flag. Placenta accreta spectrum (PAS) should have been ruled earlier itself. In the case of least of the suspicion in the USS, she should have been referred to a tertiary centre. Quality Standards on PPH , Item 5 clearly states that a dedicated ultrasound should be done at 32 weeks (OR even earlier at 20 weeks) in all women with previous Caesarean section to rule out PAS.

Observation: A 40 year old G3P2L2 at 37+5 weeks, LCB-13 yrs. Admitted on 22/10/2020 at 11.05am. She was 60% effaced ,2-3cm Cervical dilation at 7pm. On 23/10/ 21 PGE1 and oxytocin augmentation. ARM at 10 am. Fetal distress at 11 am. LSCS done. 2.3 kg baby delivered. 1mt APGAR 8. Post operatively had atonic PPH by 2.45pm. Hb – 6gm. Relaparotomy done. Had cardiac arrest and revived. Had features of DIC. Massive transfusion given. On 24/10/20 at 12.30pm, had cardiac arrest. Death declared at 3.30pm.

Recommendation : There was no indication to induce this lady as she would have got into spontaneous labour . With such a favourable Bishop's score, PGE1 induction (2 doses were given) could have been avoided. ARM + Oxytocin was done within 90 minutes of PGE1. At least 4 hours gap should be there between PGE1 and Oxytocin. ARM was immediately followed by oxytocin , which is against the recommendation. Atleast one hour gap should have been there between ARM and oxytocin. Though 54 units of blood and products were used, Patient could not be saved. No mention about the use of aorta clamp . In obstetric hysterectomy , total hysterectomy is usually not performed (as in this case), but subtotal so as to save time.

Observation : A 37year old G3P2L2 at 38 weeks with EDC-7/11/2020. Admitted on 30/10 at 9.14pm with labour pains. Normal delivery on 31/10 at 10.15am. Developed atonic PPH. Medical management failed. Obstetric hysterectomy done. Cardiac arrest on the table. Resuscitation failed. Death at 1.55pm.

Recommendation: Though this looks like a straight forward unavoidable maternal death due to atonic PPH, It is seen from the case records that Inj.Epidosin was used in this case in spite of repeated reminders from the CRMD team that vasodilators like Epidosin can aggravate the PPH . It is also not clear whether AMTSL was used. The dictum is **AMTSL ANYTIME ANYWHERE** at the delivery of the anterior shoulder.

Observations: A 32 year old G3P2L2 at 32 weeks , EDC- 16/12/2020. 2 FTND, GDM on MNT. Tested Covid positive on 12/10. Admitted in CFLTC, developed breathlessness on 16/10/2020. Referred to MCH. On admission, pulse – 104/mt, PR- 30/mt, Spo2- 95. Ut- 32 wks. Breech started on Methylprednisolone, Piptaz, Azithromycin. On 20/10/2020 had desaturation. Dyspnoec on NIV. Planned for intubation and CS. After intubation patient had cardiac arrest. CPCR started. Perimortem CS done. Resuscitation failed. Death at 6.10pm on 20/10/2020.

Recommendation: Though not much deviation from the then existing protocols, Now more scientific evidence has come to support LMWH and Cocktail with Casirivimab and Imdevimab in addition to timely admission , early recognition of Cytokine storm, steroid use , early intubation , uterine emptying , probable role of Remdesivir and futility of Antibiotic use .

Other Recommendations :

Under the suboptimal conditions of a COVID delivery , an experienced hand would be able to perform a safer surgery rather than the junior most.

BP monitoring in the Antenatal period can go a long way in reducing maternal deaths due to hypertensive disorders of pregnancy. Termination is at 37 weeks in uncomplicated cases

Oxytocin to be started after ARM as far as possible . At least in 4 maternal deaths which were discussed , it was the other way round.

Beware of the 3 associations of COVID : Hypertension , Hyperglycemia, Hypernatremia

Lack of training was evident in a series of cases . Training to extend to all peripheral doctors.

It was decided to conduct more frequent CRMD meetings to get over the backlog of cases due to COVID.