Question Report 21 maggio 2020 - Professor Lista

1 Do you use filter in delivery room, when mother COVID19 is negative? No we use only the HME in the respiratory circuit that are in the DRs dedicated to pregnant women suspected or confirmed COVID-19 positive

2 How do you facilitate glottic opening in very preterm infants at birth? We use tactile stimulation and in some cases (for study) caffeine i.v. at birth (by peripheral vein)

3 When would be an optimal timing of caffein in the delivery room management? There is not specific guidelines and so we are using caffeine i.v., in a pilot study, within the first 30 min after birth

4 What about dead space with filters used for covid? We have not exact detail on the dead space, but is probably about 3-4 ml and therefore we do not suggest to use HME for newborn less than 2.5-3 Kg; it could be important to adjust PIP.

5 What filters do you use for high flow (vapotherm)? I have not experience in using HFNC with HME

6 Do you routinely start with caffein administration in EBWI? No, only in some ELGAi and in course of controlled study

7 do you consider that humidity in the resuscitation important??? Yes, I think it is important to reduce the negative effect of cold and dry gas on the neonatal airways

8 If you have premature baby of 25 GA in delivery room, who is breathing, but need 100% of oxygen, would you intubate? At first we have to verify why the tiny baby is needing so high FiO_2; in many cases the CPAP used is not appropriate (and so, please, increase the CPAP level) or there is high mask leak or airway obstruction (and so, please, control mask and neck position); anyway this baby is very fragile and so he/she is at high risk of intubation. ...but if the HR is more than 100 bpm and the SpO_2 is > 85%...I can wait and give a chance to the ELGAi

9 Do you, in your clinic, test all mothers for COVID-19?" yes, our gynaecologists are now testing (by nasopharyngeal swab) all the pregnant women accepted for labour or delivery in hospital

10 is it therefore advisable never to exceed 0.3 of fio2? No, I think that for preterm infants, especially when < 30 wks'GA , in some cases it could be necessary to increase the initial FiO_2 (then titrate oxygen according to reference values of SpO_2) to stimulate spontaneous breathing

11 Thank you very much for your presentation. Please, what is you opinion about an intake cord circulation during neonatal reanimation? Delayed cord clamping (DCC) is physiological approach to guarantee a valid haemodynamic transition (normal preload for right heart and reduced systemic resistance for left heart); for preterm infants without severe RDS it is suggested a DCC of 60 sec; we hope in the future to use DCC also for preterm infants with severe RDS or with severe respiratory failure (e.g CDH)

12 how can thermoregulation influence in the resuscitation? We have to try to reduce risk of hypothermia that induces hypoglycaemia and worsening of respiratory failure in VLBWi. We are waiting the results of an Italian RCT that have studied the difference body temperature at NICU entry of VLBWi managed with automatic or manual control of temperature in the DR (first investigator is D.Trevisanuto, Padova). These results could suggest how to manage the VLBWi at risk for hypothermia or hyperthermia in the DR.

13 Do you administer surfactant at the delivery room? Rarely, only for ELGAi (e.g. 23 wks'GA) and when the antenatal steroid prophylaxis was not completed. Anyway, in general after some minutes of attempt of lung recruitment with pressure (CPAP or PPV by face mask)

14 se non ci sono due sale parto per covid dedicato meglio montare filtri comunque a priori sui Tv? It could be reasonable to consider this issue in case of COVID-19 pandemia not well controlled in that country.

15 Dear Doctor Lista, do you believe that the respiratory effort in severe ELBW IUGR babies depends more on the gestational age or on the birth weight? I mean, do you think that a baby born at 450grs at 26w can be managed just with NCPAP and LISA? I agree with you that these babie are very fragile and in many cases will be intubated in the DR or NICU entry, but I think that every baby needs a chance to try to be managed during transition, allowing spontaneous breathing only supported by CPAP.

16 could you please name a brand for respiratory function monitor which can be used in the field not for research purposes? In my unit we use the newLifebox - R (ADL, Germany) that is a device for measuring flow and mask pressure in high-care environments. The device is individually calibrated, and can precisely measure small Vt, flow and pressures .

17 Do you use premedication before intubation ? What meds do you use? We do not use premedication in DR (only wrapping), since it is a rescue intubation. In the NICU we use low dose of fentanyl i.v. (slow administration)

18 Do you practise late cord clamping for the extreme premature together with respiratory support? Yes, DCC for about 60 seconds, but not for very preterm infants (< 32 wks'GA);

19 what about gas conditioning ? humidified and warmed gas, I think is a very important issue

20 what about dead space with filters ? they could be a problem to ventilate neonate with low birth weight ; do not use for infants less than 2.5 Kg

21 Thank you very much for a wonderful lecture! A number of studies demonstrate an increase in IVH in premature infants with prolonged inhalation. If we do not control the tidal volume, can we be sure of the safety of such a maneuver?" You are right; I think we need to monitor what happen during SI and PPV; anyway, in general if you use a PIP < 25 cm H_2O, it is rarely to may have too much high Vt, even if we have to consider that lung compliance could be very different in the babies. So, be careful.

22 May we have your presentation screens in a file? Thank you very much: please ask MCA

23 is it below35 week 32 week to give 21to 30 %oxygen in pt babies? < 35 wks'GA, according to the recent updated AHA guidelines in 2019; but I suggest to use for very tiny babies (< 32 wks) , a FiO_2 = 0.3 just after birth, then titrate.

24 Please elaborate on role of delayed cord clamping (DCC) : DCC is physiological approach and we have to consider it for all the babies in the future ,during transition

25 In considerazione della non trasmissione del COVID per via verticale, è necessario avere accortezze particolari nella rianimazione del neonato da madre COVD positiva immediatamente dopo la nascita? Even if the vertical transmission of Coronavirus (from mother to fetus) seems to be rarely or absent, anyway since non-invasive respiratory support induces aerosolization and so high risk of virus spreading, I suggest to be cautious with these patients

26 Possibile avere informazioni in più sui dispositivi in alternativa a tp? Please read the paper of Hinder M, Archives 2018 that I have used for my presentation

27 Do you use cafeine for preterm infants who are intubated? For several days? We rarely decide to intubate the infants (even if necessary) and so we always use caffeine at NICU entry ; anyway for intubated and mechanically ventilated preterm infants we start with caffeine asap and before to try to extubate; we maintain caffeine in general until 34 wks'GA.

28 What dose of loading caffeine you use in tiny baby? 20 mg/Kg i.v.

29 Do you use surfactant in the delivery room? With any FiO_2? Rarely for ELGAi (< 24 wks'GA) and if FiO_2 still remains too much high (> 0.5-0.6 at 20-30 minutes of life in the DR even after having adjusted pressure during ventilation)

30 Is there a role for automated control of FiO2 in the delivery room? I think it is an intriguing monitoring mode to reduce SpO_2 fluctuations and risk of severe hypoxemia for very preterm infants

31 What do you think about a CPAP support (+5 cmH2O) for every newborn (especially preterm baby) to better and quickly obtain the FRC? In case of newborn with irregular breathing do you suggest to give 5 ventilation (not SLI)? We are studying which could be the optimal static CPAP in the DR, that probably is more than only 5 cm H_2O; in the future we would like to explore which is the optimal dynamic CPAP strategy. In the meantime we use SI only in very depressed infants (25 cm H_20 for 15 sec and then CPAP at 5, like in the SLI Italian trial for VLBWi of 26.0-29.9 wks'GA) or some "brief" prolonged (3 sec) at beginning when the time costant of the lung is prolonged due to presence of fluids in the airways.

32 how many saturation must be to achieve for preterm baby after from DR: we follow the reference curve published by Dawson on Pediatrics in 2010 ; anyway, our goal is 85% at 5 minutes.

33 Mothers who test positive for covid19 and give birth, are the babies tested for covid19 even if they do not have clinical symptoms? Yes, we test also their babies

34 Have you some indication about room temperature, air temperature and humidity?" DR suite temperature has to set at 21-24°C (26°C in case of delivery of ELGAi) ; humidity at 50-60%

35 any risk of inducing hypercapnia when using filters on neopuff ? yes, it is a risk that we have to consider; to minimize it , we could increase PIP level

36 Do you think RAM cannula is effective for optimum PEEP/CPAP? It is an easy disposable to use, but it shows high resistance and so the effective Vt delivered is often very low

37 Which is the best the time to adminester surfactant in ELGAN babies? "early"….is better than "late"; in general within the first 3 hrs of life

38 Any studies showing heated and humidified gases are better than without heating: please read the Cochrane of Tejas N Doctor, 2017 Feb; 2017(2): CD012549.

39 Giving the significantly different pressures generated by different devices in our DR, what about monitoring pressures by external manometer? Useful on meanigless?" The manometer without a control of exhaled Vt could be not useful

40 Excellent presentation. What do you think about prone position early after birth in very preterm infants ? during resuscitation any different position seems not be superior than supine position; in the NICU prone position is sometimes very useful to stabilize respiration of the babies

41 Compliance and raw in the first moments of life are extremely variable. Do you think rPAP is the best device currently in use? I think that rPAP is very interesting device; anyway, actually the Authors in Sweden have only tested it in vitro study; we are waiting the results of a very large RCT (CORSAD study) on its eventual benefit in a real scenario

42 what do you think about starting FiO_2 for ELBW? Is it 0,3 the right starting point? Actually FiO_2 = O is the starting level suggested, but I think that the initial FiO_2 could be higher , but just after stimulation of spontaneous breathing, the FiO_2 has to be titrated

43 What are the most often side effects of caffein and are they depend on gestational age? Tachycardia (HR > 180 bpm) especially in ELGAi

44 Based on the study of PPV with nasal prongs, when should we use this interface to reuscitate in Delivery room? We think that we need much more large RCTs on this issue, but this the future.

45 Quale differenza esiste tra un reclutamento alveolare in sala parto e uno eventuale successivo (è possibile?) con quali tempistiche viene perso: the achievement of optimal lung aeration in the DR is essential for transition and to avoid tracheal intubation; in the NICU it is important to guarantee lung volume, reduce lung inflammation and to optimize surfactant efficacy

46 I missed half of your presentation, sorry, however from what I managed to catch it was a great presentation, if I have any questions later once I see the full lecture, is there anywhere I can send my questions? Also I have never been to live lectures like this online until the pandemic, what a great opportunity to learn from each other without having to travel, thank you: please my email address is : gianluca.lista@asst-fbf-sacco.it

47 Professor, how do you confirm that ETT is in the right place if extremely preterm baby needs intubation and has HR around 40 beats per minute> Do it reasonable to rely on CO_2 detector? You can use the rule of "1789" to establish the exact position of the tip of the tube: 7 cm from the lips for baby of 1 Kg, 8 cm for 2 Kg and 9 cm for 3 Kg. Then verify with stethoscope the air-entry into the lung and in NICU with chest-X ray.CO_2 detector could be useful to verify if the tube is not in trachea, but in the oesophagus.

48 In appears t that here is no vertical trasmission of COVID 19, so do you think that is necessary having caution in management of distressed baby immediately after birth? We are not completely sure that vertical transmission is not real and so I think we have to be cautious.

49 what happens to transitioning pulmonary blood flow during high pressure sustained lung inflation? If the SI (20-25 cmH_2O) is delivered just after birth in a fluid-filled lungs the transpulmonary pressure seems not to be dangerous and the SI effect is to recruit the lung and to reduce pulmonary vascular resistance and so there is an increasing of pulmonary blood flow.

50 Do you routinely using RFM in DR, please? Thanks: yes, for all preterm infants < 32 wks'GA

51 Do you routinely use RFM in DR? For all gestational ages? Excellent talk, thanks! Yes, for all preterm infants < 32 wks'GA

52 Do you use inflation breaths during resuscitation? Yes at beginning for the first 2-3 breaths. Do you perform LISA in the delivery room? No, at this moment

53 Even not usig SLI, During IPPV right after birth what inspiration times do you suggest to manually ailm to (i.e. Longer inflations) to achieve better FRCs? 2-3 seconds for the first 5 breaths

54 What age would you give surfactant in the delivery room and then place straight onto CPAP: I think that ELGA of 23 wks'GA could be the candidate

55 If a covid positive mother delivers a preterm baby who only needs cpap, would you give cpap or NIV or would you intubate? We give a chance with CPAP by face mask and then prongs

56 Do you use the milking of cord blood for preterm babies less than 28 weeks? Not now

57 body temperature control of the ELBWI during RESUSCITATION? Always, we currently use the automatic control of temperature in the DR trolley for these babies

58 What is the maximum peep do you use in delivery room resuscitation in your unit: actually 8, rarely 10 cm H_2O

59 How high you can go for peep in delivery room: it could be reasonable 12 cmH_2O, but the Koln group of A.Kribs uses also 16 cmH_2O

60 dr, do you consider what is the best device a warmer o hibryd incubator for DR? it is an intriguing question; I have not a right answer

61 Do you use atropine medication before intubation? rarely

62 What do you use to keep your infants warm at delivery? Yes, in all the cases

63 During LISA, do you face the problem that the tube fills too much if not all the space of the trachea of the preterm baby? do you give surfactant quickly in one go? or spit the LiSA procedure into several intervals with DL reinsertion every time? We use the LISA cath that has an internal diameter less than a tracheal tube of 2 cm (so very small); we deliver surfactant slowly 60-120 seconds and trying to follow the spontaneous breathing of the baby.

64 Do you apply milking of umbilical cord in delivery room in ELBWI: not now

Signature :

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