

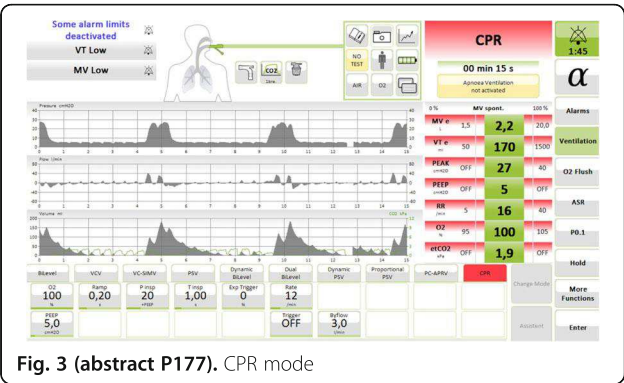


Fig. 3 (abstract P177). CPR mode

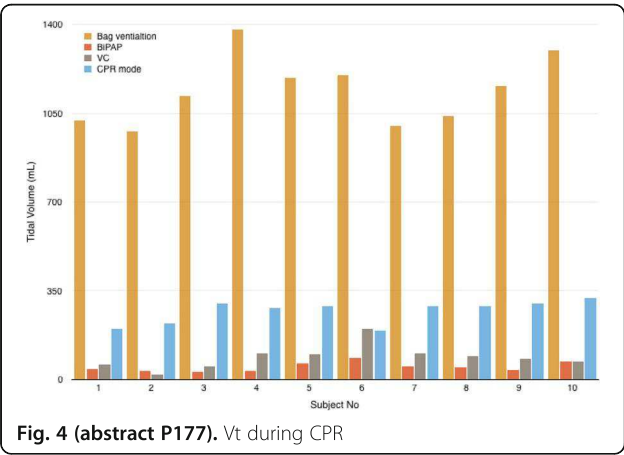


Fig. 4 (abstract P177). Vt during CPR

P178
New system to control FDO₂ with bag valve mask for premature infants
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Introduction: According to the recommendations of the European Resuscitation Council (ERC), Cardio Pulmonary Resuscitation (CPR) in premature infants must be made with a fraction of delivered oxygen (FDO₂) not exceeding 30%. Bag valve masks for premature infant (BVMp) can be used for ventilation and oxygenation during CPR. In such a case, even with a low oxygen flow rate (OFR), a BVMp delivers higher FDO₂ than recommended. Indeed, with a BVMp, FDO₂ rises proportionally to OFR but decreases inversely proportionally to minute ventilation (MV). Therefore, in neonatology resuscitation, controlling and maintaining the FDO₂ below 30% is very difficult, even with a low OFR. To meet the ERC recommendations, we developed a new system aimed at delivering adequate FDO₂ with a BVMp: the DupRey system. This system uses the Venturi effect to provides a stable air-oxygen mixture to a BVMp. The present study was aimed at evaluating the actual O₂ fraction delivered between bag valve masks for premature infant used conventionally or used with the DupRey system.

Methods: On a bench study, a BVMp (Laerdal™ for premature infant type 850150) was connected to a test lung (Maquet™ VA800 - compliance 0,02 L/cm H₂O - resistance 20 cm H₂O/L/sec. With the BVMp, two MV (0.7 L/min and 1 L/min) were generated. A metronome gave the frequency of insufflations. The BVMp was tested both with and without oxygen reservoir (OR) and the pop off valve was closed. Two OFR: 0.6 and 1 L/min were analyzed and compared to the DupRey with Venturi 24% and 28% (OFR: 5 L/min).

OFR were analyzed by a thermal mass flow meter Vogtlyn™ Red Y. The FDO₂ and MV measurements were made using an analog iWorx® acquisition system (GA207 gas analyzer associated with digital IwX 214) and LabScribe II® software.

Statistical: One Way Repeated Measures Analysis of Variance followed by Holm Sidak method.

Results: Statistical differences (p < .001) were found between A5-A6 / B5-B6 and all other columns. However, no statistical differences were found between: B2 and A2, A6 and B6, B5 and A5.

Conclusions: For an oxygen flow ranging from 0.6 to 1 L/min and two MV analyzed, a Bag Valve Masks for premature infant with an OR delivers very high FDO₂ (>86%). Without OR, at same OFRs, FDO₂ decreases but they maintain high values (>44%). The DupRey delivers FDO₂ < 30% regardless MV. The DupRey system is easily accessible for medical teams who do not have access to modern technology.

References
Wyllie J. ERC Guidelines for Resuscitation 2015: Resuscitation. 2015 Oct. 95: 249–63.

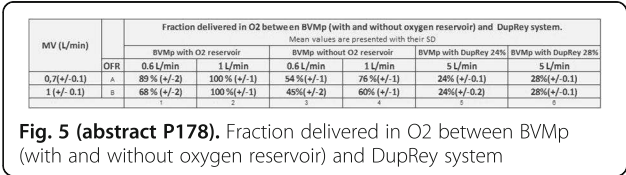


Fig. 5 (abstract P178). Fraction delivered in O₂ between BVMp (with and without oxygen reservoir) and DupRey system

P179
Could echocardiography have prognostic value in patients after successful resuscitation?
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Introduction: After successful cardio pulmonary resuscitation, many patients have poor outcome, because of current illness that causes cardiopulmonary arrest, or complications of resuscitation or any other problem. Researchers want to know if echocardiography have prognostic value in these patients.

Methods: In this case series the researchers enroll 50 patients with successful resuscitation in three general hospitals. Echocardiography was done for all patients without considering the duration of resuscitation in 24 hours after ROSC and ventricular and septal wall motion was observed for hypokinesia, akinesia or dyskinesia. Ejection Fraction (EF), E-Point Septal Separation (EPSS), Inferior Vena Cava (IVC) diameter and presence of Hepatic Portal Vein Gas (HPVG) and 24 hour's survival was measured. The relation between outcome and these echocardiographic findings were observed then.

Results: Twenty eight participants were survived and 22 were died. The median age of participants was 55.52 (SD: ±23.57) years. The mean EF for all participants was 26.74 ± 18.26 percent. The mean EF was 27.82 (SD ± 15.79) in survivors and 25.89 (SD ± 20.23) without statistically significant difference (P < 0.05). Ventricular wall motion, HPVG presence and IVC diameter has no statistically significant difference in both survivors and non survivors (P < 0.05).

Conclusions: Based on the results of this study it seems that echocardiographic findings in the first 24 hours of post resuscitation period could not help to predict the prognosis of survivors of cardio-pulmonary arrest, and it's not reasonable to send the post resuscitative patients to the other wards to do echocardiography in the first 24 hours after resuscitation.

P180
Diagnostic and therapeutic value of coronary angiography and ct-scan after extracorporeal cardiopulmonary resuscitation (eCPR) – a single center registry study
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