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Use of mechanical chest compression devices in the cathlab: nursing role and experience

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THEME: Coronary Interventions
TOPIC(S): STEMI

AIMS

Chest compression devices are used mainly in pre-hospital cares, to perform continous, good quality CPR. As scientific evidence are still weak, evidences may suggest the use of this device in particular setting like cath lab.We aim to explore the use of mechanical devices in cath lab, to grant the patient high quality CPR and minimize staff exposion to ionizing radiation.

METHODS AND RESULTS

We implement the use of this device in every cardiac arrest that require prolonged CPR, to buy time for PTCA and/or ECMO.We investigate the strategical role of nursing staff in managing this kind of emergency, cooperating with many other healtcare professionists, to ensure the best clinical outcome.We had an initial training with mechanical chest compression devices and then we start to use extensively in our Cath Lab.This device is kept in post-op cardiac ICU, and is checked routinely from ICU nursing staff, we used in every ward, cath lab and cardiac surgery OT.Experience with mechanical chest compression devices in cath lab going from January 2016 to February 2017.In this period chest compression device was used 11 times, allowing both angiography, PCI, IABP and ECMO positioning..7 (63,6%) patients was supported with IABP and in 7 cases ECMO was implanted. 6 patients received both IABP and ECMO support.Survival rate at 24 hr is 54.5%, and full recovery without significant vascular or neurological damages is 27.3%

CONCLUSIONS

Chest compression devices are helpful instruments to manage critical patient in particolar setting as cath lab, where well trained nurses, following shared guidelines with all the health professionels involved, could manage in a safe and efficacy way, this particolar clinical condition.Ensure good quality CPR troughout the procedure allow the Phisician to decide the appropriate intervention (PCI or ECMO?) and operate in the safest possible condition.