Tech 4×40-40: A no-pump technique to save possibly 1 million trauma patients yearly

Yearly 3 million persons die out of hospitals from trauma despite advanced CPR using O₂ gas at 37 °C. Tech 4×40-40 will use, alternatively the artificial blood AB, a new preserving solution containing the requisite amount of O₂ at 10 °C. Two related poster presentations were made APSC 2017-Singapore: ECHO the possible alternative to ECMO for heart failure patients-mentioning tech 4×40 briefly in my presentation. TTS 2018-Madrid: Tech 4×40-40: A no-pump technique for transplantation preservation procedures. Bigelow in 1950's and Gibbon in 1960's laid down the basis of hypothermia and concluded that at 15 °C the metabolism is reduced to 1/7. By extrapolation it is ≈1/15 at 10 °C resulting in consequential reduction in O₂ requirement. The following new life-saving technique Tech 4×40-40 is herein proposed the helplessly and inexorably dying (after, if need be, induced circulatory arrest, anesthetic or muscle paralysis to prevent increasing O₂ debt) or cardiac-arrest trauma patient, out of hospital, is immersed in circulating water at 4 °C. This is tech 4 which buys time of 45 minutes the core-temperature will dropped to about 27 °C at the 45th minute. Within 45 minutes a femoral artery catheter is inserted and a slit is made in the femoral vein. 100 liters of the AB are infused in 15 hours following specific modalities without using a pump, at a pressure of 40 mm Hg (Neurons die at 50 mm Hg if there is intra-cerebral bleeding) in such a way that the O₂ debt of the patient is paid within 2 minutes and the O₂ requirement is satisfied thereafter. This is tech 4×40 which will buy time of 15 hours, allowing transfer of the patients to the hospitals. In the hospitals, further infusion of the AB at 4 liters/hour is undertaken for 40 days=tech 4×40-40. At this stage, after this optimum life preserving technique, this will result in 2 groups of patients: (1) Survivors-with whatever intracranial bleeding stopped -possibly 1 million yearly (2) Brain Death Patients-possibly 1 million of potential donors of organs yearly.

Biography
David Andrew Yeung attained MD degree in 1976 from University of Montpellier, France. After completing, he worked as Trainee-Surgeon in Cardio-Thoracic Surgery. He was awarded fellowships at Texas Heart Institute, St. Vincent medical Center, Los Angeles. He worked extensively on cardio thoracic related surgeries. Later he joined as Assistant-Surgeon to Prof H. Raffa in first series of open-heart surgery in Mauritius and contributed extensive research in the field of Cardio-Thoracic Surgery.

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