

# Donation after circulatory death

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# Background

- The original mode of organ donation after death
- Types
  - **Controlled**; Only type in the UK
  - **Uncontrolled**; Failed CPR in ED. Spain/France
- Commonest form of attempted, but 40% of donors
- Like DBD overseen by **NHS blood and transplant**


# Further Classification

|  |   |  |
|--|---|--|
| <p><i>Category I.</i><br/>Uncontrolled</p>             | <p><i>Found dead</i><br/>IA. Out-of-hospital<br/>IB. In-hospital</p>                  | <p><i>Sudden unexpected CA without any attempt of resuscitation by a life-medical team; WIT to be considered according to National life-recommendations in place; reference to in- or out-of-hospital life-(IH-OH) setting</i></p> |
| <p><i>Category II.</i><br/>Uncontrolled</p>            | <p><i>Witnessed cardiac arrest</i><br/>IIA. Out-of- hospital<br/>IIB. In-hospital</p> | <p>Sudden unexpected irreversible CA with <i>unsuccessful resuscitation</i> life-by a life-medical team; reference to in- or out-of-hospital (IH-OH) life-setting</p>  |
| <p><i>Category III.</i><br/>Controlled</p>             | <p><i>Withdrawal of life-sustaining therapy</i></p>                                   | <p>Planned withdrawal of life-sustaining therapy; expected CA</p>  |
| <p><i>Category IV.</i><br/>Uncontrolled Controlled</p> | <p><i>Cardiac arrest while life-brain dead</i></p>                                    | <p>Sudden CA after brain death diagnosis during donor life-management but prior to planes organ recovery.</p>  |

# Comparison of DCD and DBD

|     | DCD  | DBD  |
|-----|--|--|
| +ve | ...Unlimited number of donors  | Assessment and optimisation of organs pre donorship<br><br>Limited warm ischaemia time |
| -ve | Long warm ischaemia time<br><br>Expensive<br><br>Higher failure rate | Limited number of donations  |

# Sequence of Events



- Planned withdrawal of life sustaining treatment

- Family discussion...and agreement

- SNOD involvement

- Organs offered and accepted for transplant

- Withdrawal of life supporting treatment

- Death and diagnosis with 3-4 hours

# Warm Ischaemic Time?

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- The time from withdrawal of treatment when perfusion and oxygenation are inadequate to cold perfusion.

# What organs?

- Kidneys WIT < 2 hrs
  - Grafts take longer to work
- Liver pancreas WIT < 30min
  - More graft failure
- Lung well suited if oxygenated
  - Avoid SNS storm in DBD
- Soft tissues; valves, corneas, skin, bone.



# Cause of death in DCD?

- Ischaemic Stroke
- Cardiac arrest
- Trauma
- ICH
- Hypoxic brain injury
- Respiratory disease

Contra-indications to organ donation?

# Contra-indications to organ donation?

- Absolute
  - Known HIV disease
  - nCJD suspected or similar
- Relative
  - Age >70
  - Disseminated cancer
  - Active TB
  - Untreated Sepsis

# Notes on the opt out law

- Live in spring 2020
- Does not apply to those
  - Under 18
  - Without capacity
  - Visitors and those not here voluntarily
  - Residents < 1 year

# Exam suggestions

1. Use all the courses available, pay extra if can.
  2. Daily quota of work
  3. BJAEd articles best resource.
    1. Flash cards
    2. Read as if you were writing a question on it
- Passing doesn't make you good
  - Failing doesn't make you bad

# References

- NHS Blood and transplant
- 14<sup>th</sup> Oct NHS BT and AAGBI webinar, FREE
- British Transplant Society donation after circulatory death guidelines