

# The Patient is Deceased, now what?

Richard Millstein DO PGY 2  
12/18/13



# Code Status?

FULL

DNRCCA

DNRCC

# Declaring Death

- ◆ Nurse calls: “can you come pronounce the patient?”

# Grandview Guidelines

- ◆ Diagnostic criteria for **CLINICAL** diagnosis of brain death
  - ◆ The absence clinical brain function when the proximate cause is known and irreversible
  - ◆ 1) clinical neuro imaging of an acute CNS catastrophe that is compatible with Dx of brain death
  - ◆ 2) Exclude confounding medical conditions
  - ◆ 3) Exclude confounding medications

# Must Be Corrected if questionable

- ◆ Must correct severe electrolyte abnormalities
- ◆ Shock
- ◆ Medication induced complications
- ◆ Sedating agents must be stopped and cleared from body
- ◆ Hypothermia must be corrected

# How to examine

- ◆ Absent cranial nerve reflexes
- ◆ No heart or lung sounds
- ◆ No pulse

# Organ Donation

**NOW WHAT?**

# Numbers

- ◆ Currently over 120,000 men, women, children are awaiting organ donation in the US ([donatelife.net](http://donatelife.net))
- ◆ 79 people daily receive new organs daily
- ◆ 18 people daily die not getting organs daily



# What organs can be donated?

## ◆ Deceased

### ◆ Tissue

- ◆ Corneas, skin, heart valves, bone, veins, cartilage, tendons, ligaments

### ◆ Stem cells

- ◆ Kidneys, Heart, Lungs, Liver, pancreas, intestine

- ◆ Combined organs

## ◆ Alive

### ◆ Skin

- ◆ Stem cells (age 18 -60), marrow, blood, platelets, plasma

- ◆ Kidney, lung

# Brain vs Cardiac?

- ◆ Organ donation after Brain Death
  - ◆ **Heart, Liver, Kidneys, and Pancreas** have the best chance when constant blood supply is available
- ◆ Organ donation after Cardiac Death
  - ◆ Avg 60 minutes from extubation to organ retrieval
  - ◆ After cardiac death only “Tissues” can be donated
  - ◆ **Eye, heart, bone, and skin tissues**

# What is tested for?

- ◆ HIV
- ◆ HTLV
- ◆ Hep B, C
- ◆ CMV
- ◆ syphilis
- ◆ Signs of infection- need to have negative cultures, or if positive need tx first.
- ◆ Chest Xray, CMP, CBC
- ◆ Tests for blood flow to brain or oxygen uptake by brain
- ◆ Various others

# Absolute Contraindications

- ◆ A transmissible infectious disease that will adversely affect the recipient (ie HIV, active hepatitis B, west nile, encephalitis of unknown cause, Jakob-Creutzfeldt's disease, malaria, or disseminated TB)
- ◆ Active visceral or hematologic neoplasm
- ◆ Clinical signs that indicate the organ is unlikely to function

# Wait times (Median National)

**Heart**

113 days

**Lungs**

141 days

**Livers**

361 days

**Kidneys**

1219 days

**Pancreata**

260 days

**Intestine**

159 days

# Standardization

- ◆ In 1999 the United Network of Organ Sharing (UNOS) was initiated
  - ◆ They recommended certain physiologic goals to improve procurement and transplantation of organs.
  - ◆ Improved procurement by 10.3% and transplant by 11.3%
  - ◆ Also 19.5% increase in heart transplants
- ◆ Other procurement goals have since been produced.

Rosendale JD, Chabalewski FL, McBride MA, et al.  
Increased transplanted organs from  
the use of a standardized donor management protocol.  
1. Am J Transplant 2002;2:761-8.

# Donor Management Goals

- ◆ Improves number and outcomes of transplants
  - ◆ Sodium < 160
  - ◆ MAP  $\geq 70$  and/or SBP  $\geq 100$
  - ◆ PaO<sub>2</sub>/FiO<sub>2</sub>  $\geq 300$
  - ◆ One low dose or no Vasopressors
  - ◆ pH 7.3 – 7.45

# Organ Referral Triggers

- ◆ Suspected Neuro insult, heart beating, ventilated
  - ◆ GCS  $\leq 5$  or loss of  $\geq 2$  cranial reflexes
    - ◆ Posturing, absence of cough, gag, or corneal reflexes or pupillary changes
- ◆ Initiation of hypothermic protocol
- ◆ Discussion of Change in code status
- ◆ Planned withdrawal of ventilatory support
- ◆ Grave, Poor, Grim prognosis charted





# When to call

- ◆ Referral should be within **3** hours of patient meeting these clinical triggers
- ◆ DONOR REFERRAL CENTER
- ◆ 937-223-1606 or 877-223-1606

# Osteopathic Intervention

- ◆ Grieving families
- ◆ Treat the **WHOLE** patient
  - ◆ Family, life, comfort
- ◆ Follow the patient's wishes



# How does one donate?

- ◆ When you obtain a new drivers' license or state license
- ◆ Online enrollment form
  - ◆ <http://publicsafety.ohio.gov/links/bmv3346.pdf>
- ◆ Join Ohio Donor Registry
  - ◆ <http://www.donatelifeohio.org/>

# References

- ◆ Rosendale JD, Chabalewski FL, McBride MA, et al. Increased transplanted organs from the use of a standardized donor management protocol. Am J Transplant 2002;2:761-8.
- ◆ McKeown, D.W.; Management of the Heartbeating Brain-Dead Organ Donor; British Journal of Anaesthesia Vol 108 pp96-107
- ◆ Lustbader, Dana MD; Goldstein, Michael MD; Organ Donation After Cardiac Death;  
[http://www.eperc.mcw.edu/EPERC/FastFactsIndex/ff\\_242.htm](http://www.eperc.mcw.edu/EPERC/FastFactsIndex/ff_242.htm)  
The Facts About Donation ; Transplant Australia;  
<http://www.transplant.org.au/The-Facts-About-Donation.html>