NCCU

- ☒ [✓ admin, 2025-04-01]~~normal EVD output~~
- ☐ MELAS
- ☐ scores for predicting ICH outcomes
  - ICH score: predicts mortality at 1 month
    - comprised of GCS, age> 80, ICH vol >30 mL, IVH, infratentorial hemorrhage origin
  - FUNC score: 90 day function
    - comprised of ICH volume, age, ICH location, GCS, pre-ICH cognitive impairment
- ☐ calculating IVH size
- ☐ Spetzler-Martin grading system for AVMs
- ☐ digital subtraction angiography
- ☐ Parinaud syndrome
- bicaudate index
- SAH grading
  - Hunt Hess
  - modified fisher
- normal pressure perfusion breakthrough
  - AVM resection and BP goals
  - Hydrocephalus ex vacuo vs obstructive hydro

nimodipine used for vasospasm ppx for aneurysm-related SAH. Not clear re: AVM.

ICU Improvements

- vent reporting
- limit to ACTIVE, RELEVANT ICU issues
- for A/P, ACTIVE ICU problem and status of what's keeping them here
- MINIMIZE computer use
  - especially as you get to know patients
  - use primarily for DATA reporting (vitals, labs)
- chronic issues (only ACTIVE, relevant ICU issues)
  - e.g., ACI, hypothyroid
  - “no acute issues”
- “vital signs stable”
- GFAP

To Read

- https://doi.org/10.34197/ats-scholar.2020-0019PS
- PVAT (pulmonary velocity acceleration time)

RC711 .W469 2017, RC776.P87 P854 2004, RC756 .W45 2019

- Vent Waveforms

Alveolar Gas Equation

$PAO2 = FiO2(P{atm}-P{H2O}) - \frac{PaCO_2}{RQ}$

substituting back in to RQ equation: $RQ = \frac{P_ACO_2}{\frac{V_AP_ACO_2}{kVO_2}}= \frac{VO_2}{V_a}k$

$V_T = V_A + V_D$, where $V_A = 350$ and $V_D = 150$

Dead Space Fraction

$\frac{V_D}{V_T} = \frac{P_ACO_2 - P_ECO_2}{P_ACO_2}$

Formal measurement of P_ECO_2 requires volumetric capnography, which requires a capable ventilator or a dedicated measurement device.

Thankfull, $P_ECO_2 \approx ETCO_2$, so an approimation would $\frac{V_D}{V_T} = \frac{P_ACO_2 - ETCO_2}{P_ACO_2}$

Alveolar ventilation

$P_{A}O_2 = F_iO_2(P_{atm}-P_{H_2O}) - \frac{P_AO2}{RQ}$
$\dot{V}_A=k\frac{\dot{V}CO_2}{P_ACO_2}$ $\implies \dot{V}CO2 = \frac{\dot{V}_AP_ACO_2}{k}$

To convert F_ACO_2 into P_ACO_2, we have $F_ACO_2(P_{atm} - PH_2O = P_ACO_2$ Similarly, using F_ECO_2, we can show $P_ECO_2 = F_ECO_2(P_{atm} - P_{H_2O})$

$Volume_{expiredCO2} = Volume_{producedAlvCO2}$

$V_TF_ECO_2 = V_AF_ACO_2$

$V_TF_ECO_2 = (V_T - V_D)F_ACO_2$, and we can convert F_ACO_2 into P_ACO_2