

FIVES

if you can remember only 5 items



5 Hs of reversible cardiac arrest

hypoxia

hypovolemia/hemorrhage



hyperkalemia

hypokalemia

hypothermia



5 Ts of reversible cardiac arrest

thrombosis: ACS

thrombo-embolism: PE

tension pneumo

tamponade

toxins

incl opiates, insulin



the first 5 causes of shock (A. S.H.O.C.K.E.D.)

anaphylaxis

sepsis

hypovolemia/
hemorrhage



obstructive:
PE, tamponade, tension

cardiogenic



hyperacute dyspnea: 5A's + 5T's + triangle of wheezes

a
naphylaxis

a
spiration & plugging

a
ngioedema

a
rrhythmia

a
sthma attack



hyperacute dyspnea: 5As + 5Ts incl. **t**riangle of wheezes 

thrombosis ACS

thrombo-embolism PE

tension
pneumothorax

tamponade
(incl. typeA-AoD)

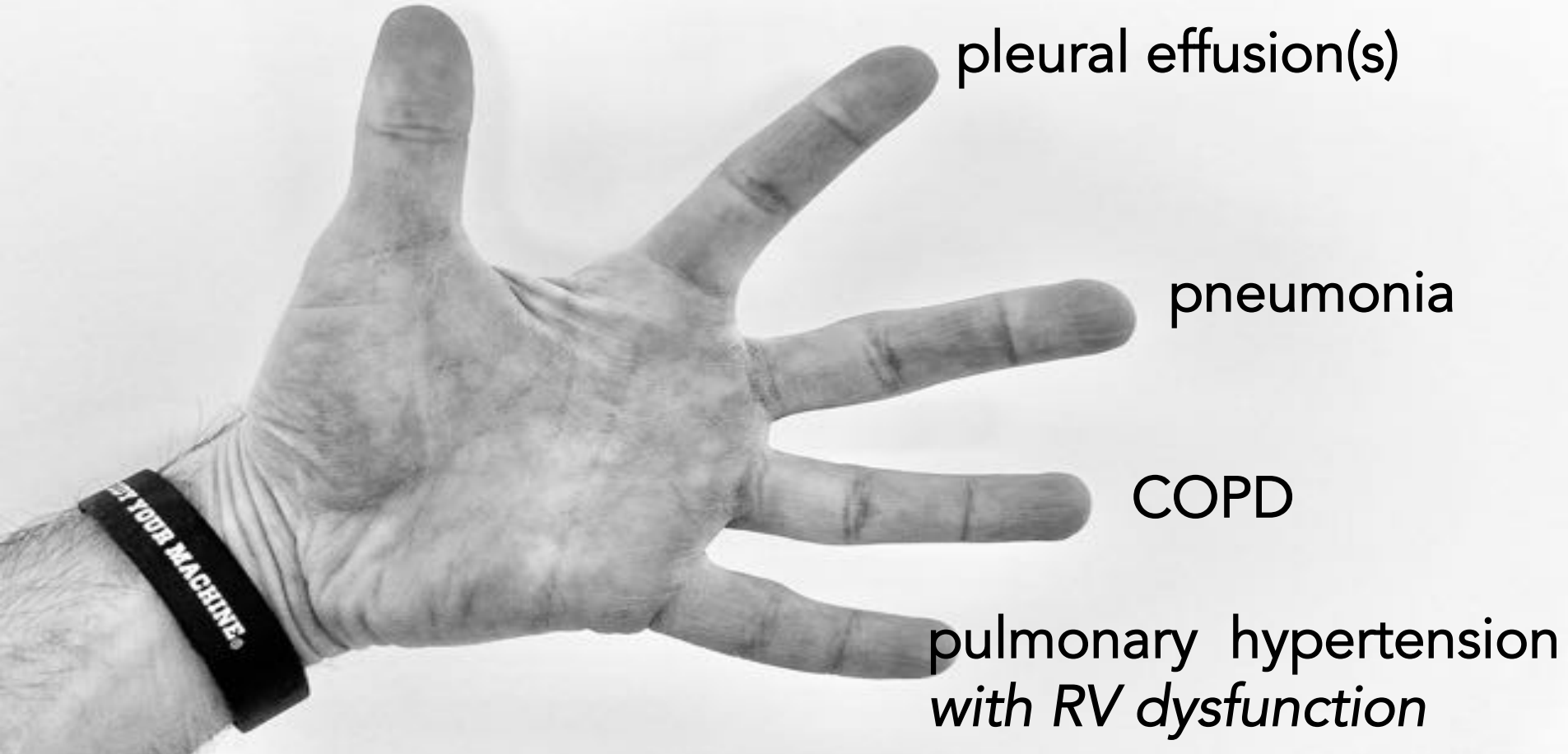
triangle of wheezes





acute dyspnea: often 5 together

AHDF with pulmonary edema



pleural effusion(s)

pneumonia

COPD

pulmonary hypertension
with RV dysfunction



(hyper)acute dyspnea with hypoxia: 5 **P**s



plugging, mucous

pneumonitis from
aspiration

pneumothorax

PE

pulmonary edema, flush
SCAPE, FPE





acute dyspnea: consider **5** non-cardiopulmonary causes

hypoventilation

opiates

neuromuscular: GBS, MG

metabolic acidosis

severe anemia

wrong Hb CO- Hb
Met-Hb

non-pulmonary sepsis
(„extrapulmonary ARDS“)





acute dyspnea: 5 rare causes

DAH in vasculitis

GPA, leptospirosis

air embolism
(e.g. after CVC ex)

phrenicus palsy
(e.g. after cervical
block)

pneumonitis
drugs

lymphangiosis
carcinomatosa



5 Ps to consider before diagnosing AE-COPD

pulmonary edema: CHAMP

pneumothorax

pneumonia

PE

pleural effusions



CHAMP for causes of cardiogenic pulmonary edema

coronary: ACS

hypertension

arrhythmia

mechanical causes
valves

peri/myocarditis



5 most common causes of ARDS: PSA + PT

pulmonary infections

sepsis, extrapulmonary
incl. abdominal

1

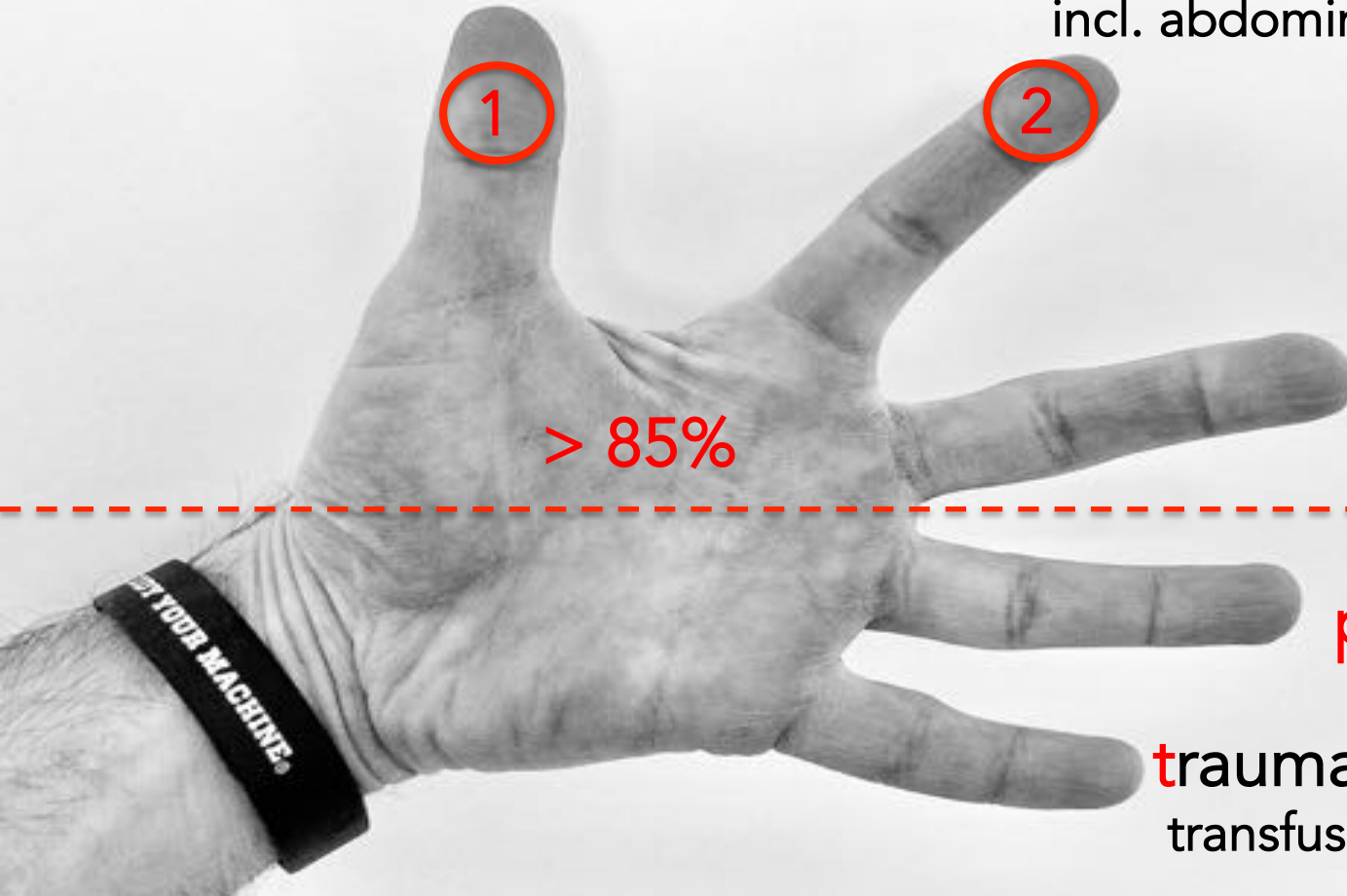
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> 85%

aspiration of
gastric content

pancreatitis

trauma, esp. with massive
transfusion/burns/surgery



5 common causes of non-traumatic diffuse hypoxic parenchymal pulmonary involvement: **A.B.C.D.E.**

aspiration

bugs [pulmonary infections
sepsis, extrapulmonary
incl. abdominal crisis
(AIOP) & pancreatitis

„ARDS mimics“, „secondary ARDS“

CTD (SS,RA) &
vasculitis (GPA)

drugs

exacerbated ILD incl.
AIP („idiopathic ARDS“)

traumatic ARDS: trauma/burns/hemorrhage/
massive transfusions



Ps in managing ARDS

p_aO_2 55-70 mmHg
SatO₂ 88-92%

permissive $\uparrow pCO_2$

protective ventilation

$\Delta p < 14$

V_t 6 ml/kg

$p_{max} < 27-30$

prohibition + permission

restrictive fluids hypercapnia

PEEP

12-15

proning

(≥ 17 hrs/d)

paralysis

≤ 48 hrs

proceed to vvECMO



S.H.I.T.I. things that happen post-OP

sepsis

hemorrhage

ileus &
gastroparesis

thrombosis
ACS, PE, AMI

insufficiency of
anastomoses



S.H.I.T.². happens

sepsis

hemorrhage

ileus &
gastroparesis

thrombosis
ACS, PE, AMI

tox: new meds, ψ
withdrawal: sedatives, alcohol



5 S of altered mental state (AMS): basics

sugar

sodium

substances
drugs
new meds

shortage of
substances: withdrawal
vitamins: Wernicke

seeO₂ (CO₂ narcosis)



5 S of altered mental state: internal medicine

sepsis

sac full of urine

STEMI

system failure:
liver, kidney, endocrine

seeO (CO intoxication), Met-Hb



5 S of altered mental state: neurology

See NS infection

subdural hematoma
and other ICH incl SAB

space-occupying lesion
(esp. frontal)

stroke
posterior circulation
venous CSVT

seizure
(NCSE, postictal)



5 Ts to ask the EMS that brought a patient with AMS

trauma (even minor)

tablets

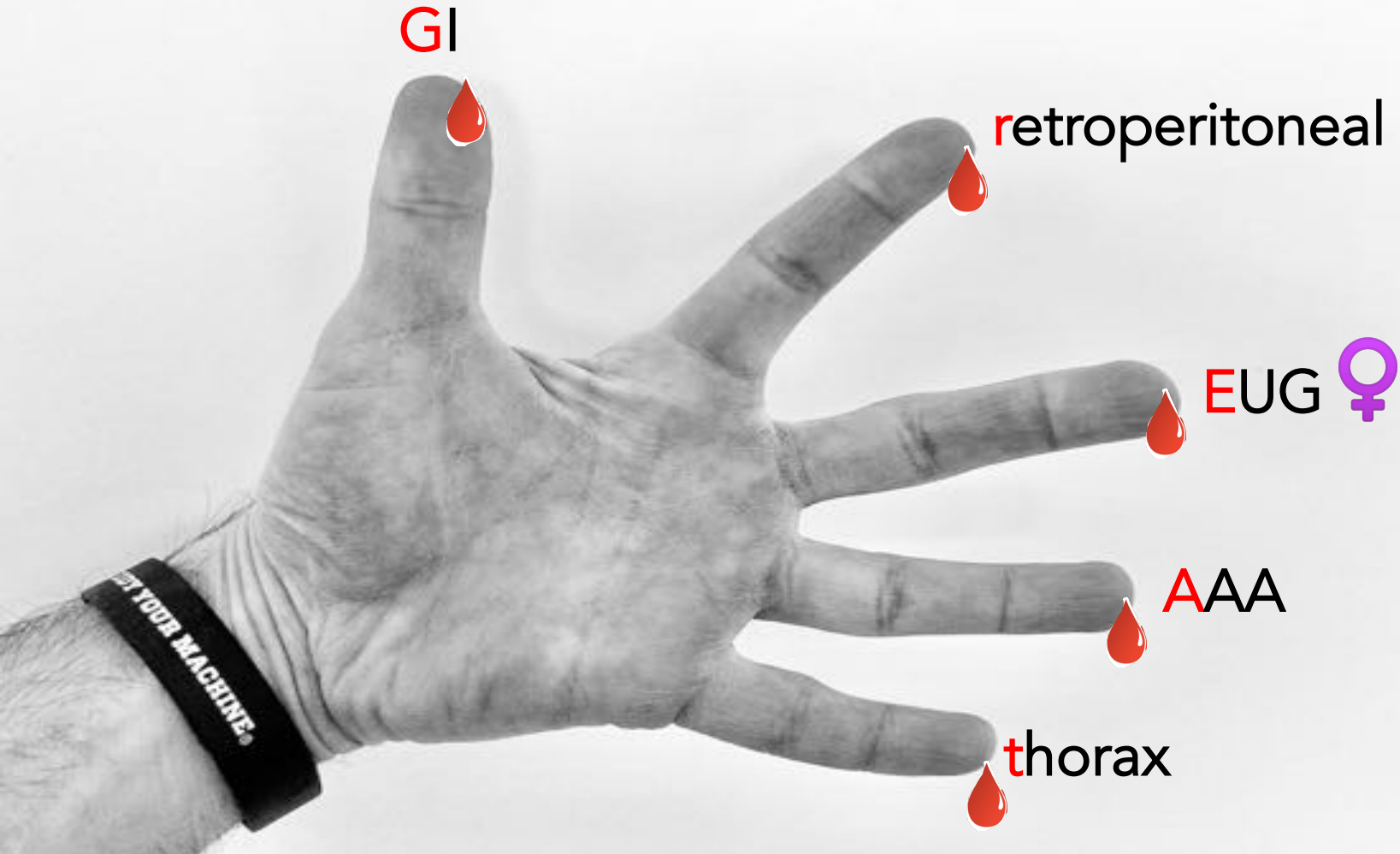
temperature

toxins

travel



5 G.R.E.A.T. sites to bleed from



D. O. P. E. S. for crashing intubated

dislocation of the tube
incl right mainstem intubation

obstruction of the tube

patient

equipment

stomach/ stakes



Patient in D. O. P. E. S. for crashing intubated: 5 Ps

p
atient –ventilator
dyssynchrony

p
lugging of the bronchi due to
secretions

p
neumothorax

p
neumonia: VAP

PE

p
leural effusions are rarely the cause of crash,
but might contribute together with p
ulmonary edema



A.E.I.O.U. for triggers for emergency dialysis/ RRT

acidosis

electrolytes: hyperK⁺

intoxications

overload

uremia

pericarditis, bleeding, encephalopathy



patient with alcohol use disorder –
just intoxicated?- take 5 min of your **T.I.M.E.** to consider

trauma

- head
- c-spine
- body

infection

- pneumo, SSTI
- CNS
- IE in IVDU

metabolic:

- hypoglycemia
- Wernicke
- ASH, pancreatitis
- e-ytes: Na, K, Mg
- AKA ketosis
- HE hepatic enceph

else: alc +

BZD, opiates, toxic alcs

sobering= ? withdrawal



the big 5 of chest pain

ACS

aortic dissection
(Type A)

pneumothorax

PE

esophageal rupture
Boerhaave



allergies

medications

past med hx

last meal

exposure — | bugs
drugs
incl alc



HI MAP for ED sonography



heart

IVC

Morrison

aorta

pneumothorax



A.I.O.P.! for surfical causes of acute abdomen

abscess: appendicitis, diverticulitis

ischemia

obststruction

perforation

all of the above



S.H.I.V.A. for main causes of mechanical ileus

stenosis

hernia

invagination

volvulus

adhesions



Fall in the Elderly: Always ask *why?*- A.B.C.D.E.?

AccuCheck: blood glucose

Bugs: esp. pneumonia

Cardiac: EKG!!!

Drugs: new, ψ ,
sedatives, polypharma

Electrolytes: Na^+



↑ lactate in a sick patient



sepsis

cardiogenic shock

hemorrhage



liver failure

ketoacidosis

- alc ($\pm$ pancreatitis)
- diabetic



A.B.C.D.E. of your every-second attitude

Affection

Broadmindedness

Curiosity

Joy

Diligence

Empathy



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XXX

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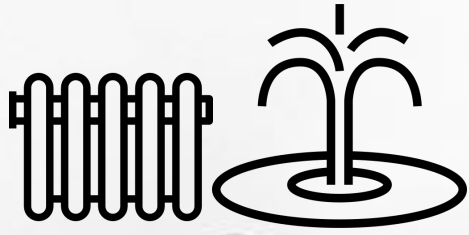
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To Be



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