



**MINISTÈRE
DES ARMÉES**

*Liberté
Égalité
Fraternité*



War wounded pain management : the French connection



20th october 2022



No ties of interest

Why treat pain on the battlefield ?



Malchow Crit Care Med 2008

Three levels of care : the French TCCC



Level 1 : every soldier (SC 1)
Stop the bleeding and extraction



Level 2 : health-qualified operators (SC 2)
Early life-saving procedures



Level 3 : physician and nurse (SC 3)
Damage control resuscitation

Pasquier Injury 2014



War wounded management mnemonic device

| | | |
|----------|--------------------------------------|---|
| S | Stop the burning process | <i>Répliquer par les armes</i> |
| A | Assess the scene | <i>Analyser ce qu'il se passe</i> |
| F | Free of danger | <i>De la fumée pour Extraire le blessé et des soins sans danger</i> |
| E | Evaluate the casualties | <i>Evaluer le blessé par la méthode START</i> |
| M | Massive bleeding control | Garrots, compressifs, packing, hémostatiques, stab. pelvienne |
| A | Airway | Subluxation, guêdel, crico-thyroïdotomie, intubation |
| R | Respiration | Oxygène, exsufflation, ventilation, intubation |
| C | Choc | Abord vasculaire, remplissage, adrénaline titrée |
| H | Head / Hypothermia | Conscience, protection VAS, perfusion cérébrale, hypothermie |
| E | Evacuate | 9 line CASEVAC/MEDEVAC Request |
| R | Réévaluer | |
| Y | Les yeux | |
| A | Analgésie | |
| N | Nettoyer et panser les plaies | |

Pasquier Injury 2014

Where, how and who treats pain ?

| | | |
|---|---------------------------------|---------------|
| Tactical Casualty Collection Point | SC Morphine administration* | SC1, SC2, SC3 |
| | Immobilizations of fractures | SC1, SC2, SC3 |
| Casualty Collection Point | SampSplint®, CT-6® | SC2, SC3 |
| | IV Morphine | SC3 |
| | Orodispersible Oxycodone | SC3 |
| | Methoxyflurane | SC3 |
| | Procedural sedation analgesia | SC3 |
| | Fascia iliaca compartment block | Physician |

Forward combat casualty care guidelines 2022 – Val de Grace Academy

** Pasquier Br J Pain 2016*

In real life ?



Travers Transfusion 2019

In real life ?

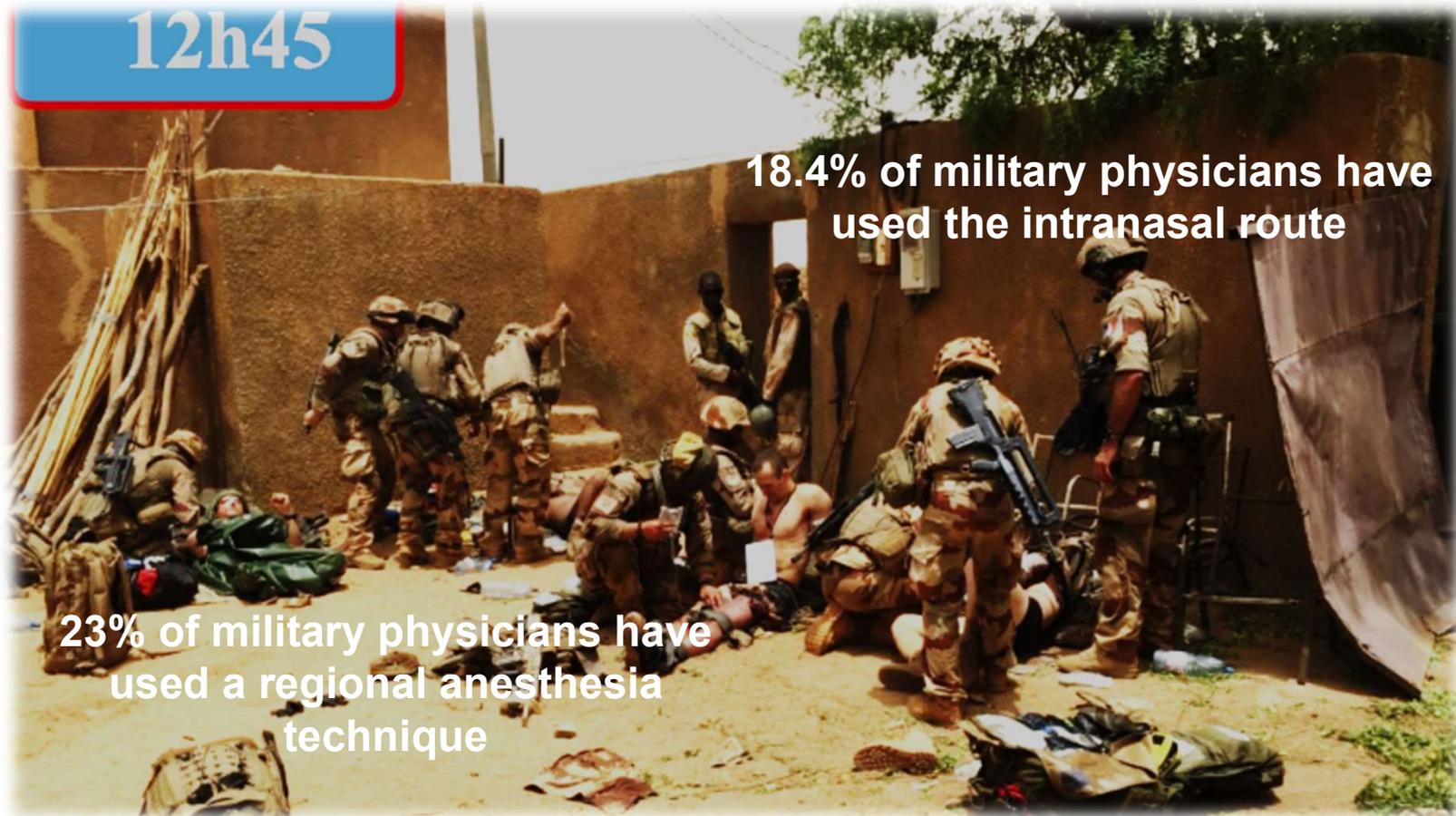
82 French war wounded in Sahel

IV Paracetamol : 30%
SC Morphine : 19.5%
IV Morphine : 19.7%
SAP : 7%
IV Ketamine : 4.6%
Block : 1%

Pain monitoring : 0

Unpublished datas, acknowledgements: Dr. N. Cazes

In real life ?



*Montagnon J Spec Oper Med 2021
Chiniard Ann Fr Med Urg 2017*

And at your friends ?



- 8,576 patients, **12.3% treated with an analgesic** in prehospital setting
- 74.7% Morphine / 13.6% Fentanyl / 9.6% Ketamine

Benov J Trauma 2017



- 8,913 patients, **15% treated with an analgesic** in prehospital setting
- Pain monitoring : 7%
- 65% Morphine / 24% Fentanyl

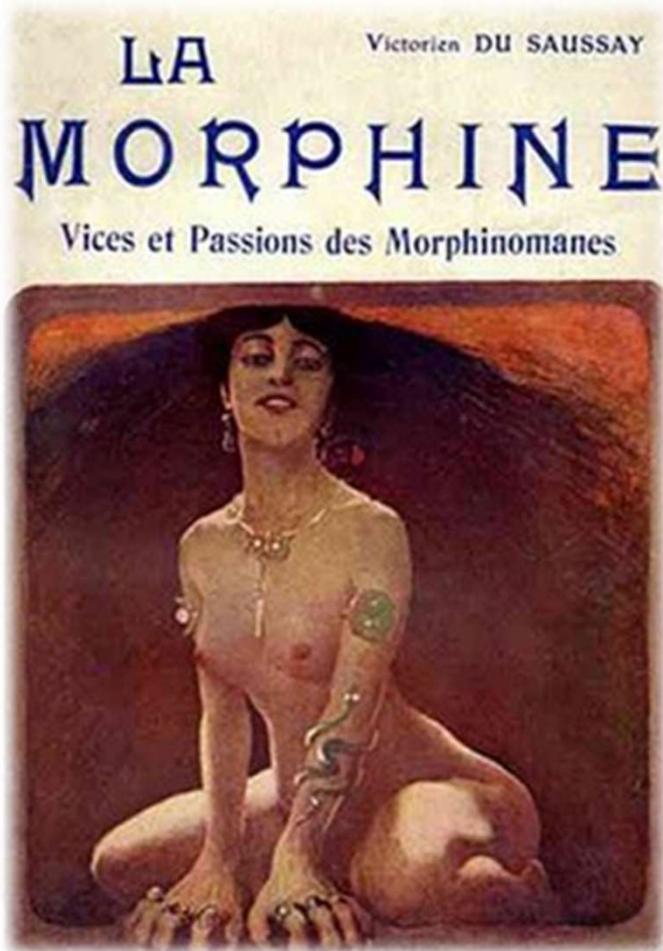
Gerhardt Prehosp Emerg Care 2016



- 70% of military caregivers do not find pain management optimal on the battlefield
- 92% wanted a strong, fast-acting analgesic

Blankenstein Brit J Pain 2015

A historic and cultural unconscious mind



A frustrating topic



Challenges of pain management on the battlefield...

- An area for improvement in our care
- An issue of high-intensity conflicts
- A field for innovations
- A field for clinical research
- **An added value in favor of the presence of a physician at the front**



Parker BMJ Mil Heath 2022



Montagnon J Spec Oper Med 2021



*Petz Mil Med 2015
Benov J Trauma 2017*



...but also an interest in homeland in counter terrorism



Corcostegui Intern Emerg Med 2019

Take home messages

- A topic where we need to improve
- No magic potion
- Rediscover the added value of the **caregiver**



Thank you for your attention

