



SFAR
Société Française d'Anesthésie et de Réanimation

LE CONGRÈS

ANESTHÉSIE RÉANIMATION URGENCES DOULEUR

21-23 SEPT 2017 PALAIS DES CONGRÈS DE PARIS

www.sfar-lecongres.com

TRANSFUSION PRÉCOCE DU BLESSÉ DE GUERRE: ÉTUDE PROSPECTIVE DURANT L'OPÉRATION BARKHANE

- V.Vitalis ; C .Carfantan ; A.Montcriol ; S. Peyreffite, A.Luft, T.Pouget, S.Ausset , E.Meudre, J.Boissier ; C.Bay ; A. Sailliol ; J.Bordes

Session du CARUM



INTRODUCTION

- Blessures de guerre:
 - Traumatismes pénétrants
 - explosions (IED)
 - Hémorragie:
 - Blessés nécessitent une évacuation rapide (OTAN: « golden hour », voire dans les 2 heures)
 - damage control surgery
 - damage control resuscitation
 - Majorité des décès avant l'arrivée au role 2
 - 1 décès sur 4 évitable, 90% liés à l'hémorragie
 - chez ces patients: augmentation de l'incidence des transfusions massives
- Remote damage control resuscitation:
 - contrôle des hémorragies, réanimation à bas volume, acide tranexamique, transfusion (PLYO, CGR, sang total) +/- concentrés de fibrinogène
 - Coagulopathie post traumatique précoce, aggravation pronostic
 - Triade létale: coagulopathie, acidose, hypothermie





SFAR
Société Française d'Anesthésie et de Réanimation

LE CONGRÈS

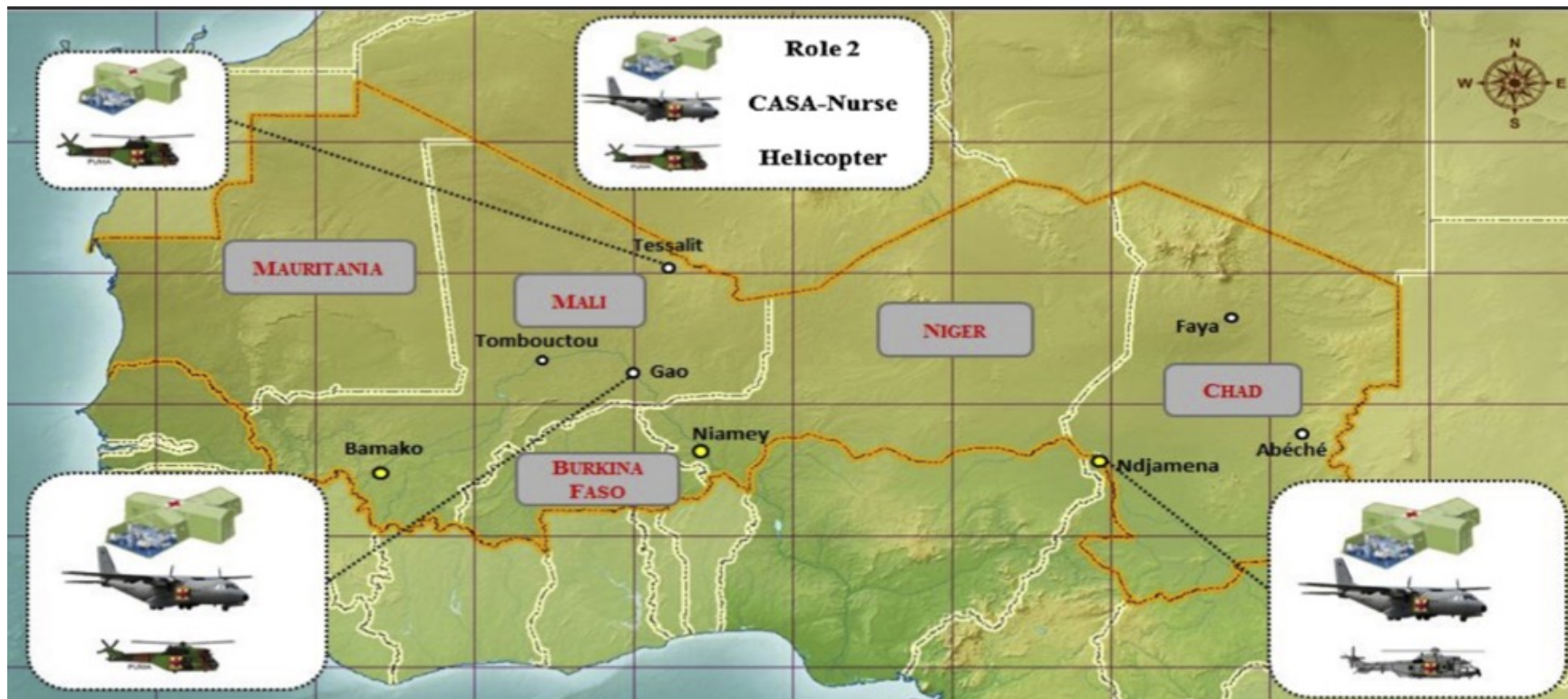
ANESTHÉSIE RÉANIMATION URGENCES DOULEUR

21-23 SEPT 2017 PALAIS DES CONGRÈS DE PARIS

www.sfar-lecongres.com

Organisation du service de santé : opération Barkhane

- Les forces armées françaises
 - depuis février 2013 Bande Sahélo Saharienne : BSS (opération Serval puis **opération Barkhane**),
 - territoire : plus de 5 millions de kilomètres, 5 pays (la Mauritanie, le Mali, le Burkina Faso, le Niger et le Tchad).
- France 643 000 km²





SFAR
Société Française d'Anesthésie et de Réanimation

LE CONGRÈS

ANESTHÉSIE RÉANIMATION URGENCES DOULEUR

21-23 SEPT 2017 PALAIS DES CONGRÈS DE PARIS

www.sfar-lecongres.com

CHAÎNE SANTÉ: ROLES 1 À 4



- Pas de role 3 sur la BSS



SFAR
Société Française d'Anesthésie et de Réanimation

LE CONGRÈS

ANESTHÉSIE RÉANIMATION URGENCES DOULEUR

21-23 SEPT 2017 PALAIS DES CONGRÈS DE PARIS

www.sfar-lecongres.com

Délais allongés

an

- Durant l'opération Barkhane
 - Carfantan et al a reporté un délai d'évacuation médian vers le role 2 de 145 min pour les patients alpha,
 - de 205 minutes pour les patients bravo
- sur le territoire du Sahel

ARTICLE IN PRESS

Injury, Vol. J, Case Injured xxx (2016) xxx-xxx

Contents lists available at ScienceDirect

Injury

journal homepage: www.elsevier.com/locate/injury

Original article

Forward medevac during Serval and Barkhane operations in Sahel: A registry study

Cyril Carfantan^{a,*}, Yvain Coudard, MD^b, Christophe Butin, MD^c, Sandrine Duron-Martinaud, MD, MPH^d, Jean-Philippe Even, MD^e, Anthony Anselme, MD^f, Erwan Dulaurent, MD^g, Mélanie Géhant, MD^h, Vicky Vitalis, MD^b, Christian Bay, MDⁱ, Jérôme Bancarel, MD^j, Julien Bordes, MD, MSc^k

^aFrench Military Medical Service, Medical Center of Sékougou air base, BA 126 RN 190 Co 10001 Westend 20223 Châteauneuf-Colac, France
^bFrench Military Medical Service, 75th paratrooper forward surgical unit, Lavanon Military teaching hospital, general surgery unit, Marseille France
^cFrench Military Medical Service, 75th paratrooper forward surgical unit, Sainte-Anne Military teaching hospital, orthopedic surgery unit, Toulon France
^dFrench Military Medical Service, French Military Center for Epidemiology and Public Health, France
^eFrench Military Medical Service, Medical Center of Juvencourt air base, France
^fFrench Military Medical Service, Medical Center of Agde, France
^gFrench Military Medical Service, Medical Center of Maza-de-Mézan air base, France
^hFrench Military Medical Service, Medical Center of Uzes, France
ⁱFrench Military Medical Service, French Military Medical Service Academy - Ecole de Médecine, France
^jFrench Military Medical Service, Operational Headquarters, 401 Casualty operations eGRC, France
^kFrench Military Medical Service, 75th paratrooper forward surgical unit, Sainte-Anne Military teaching hospital, intensive care and anesthesiology unit, Toulon, France

ARTICLE INFO

Keywords:
 Forward MEDDEVAC
 Trauma
 Joint trauma system
 Conflict
 French military
 PLYP
 PSLC

ABSTRACT

Introduction: The French army has been deployed in Mali since January 2013 with the Serval Operation and since July 2014 in the Sahel-Saharan Strip (SSS) with the Barkhane Operation where the distances (up to 1300 km) can be very long. French Military Medical Service deploys an inclusive chain from the point of injury (POI) to hospital in France. A patient evacuation coordination cell (PSECC) has been deployed since February 2013 to organize forward medical evacuation (MEDDEVAC) in the area between the POI and three forward surgical units.

The purpose of this work was to study the medical evacuation length and duration between the call for Medevac, location accidents and forward surgical units (role 2) throughout the five million square kilometers French joint operation area.

Materials and methods: Our retrospective study concerns the French patients evacuated by MEDDEVAC from February 2013 to July 2016. The PSECC register was analyzed for patients' characteristics, NATO categorisation of gravity (Alpha, Bravo or Charlie who must be respectively at hospital facility within 90 min, 4 h or 24 h), medical motive for MEDDEVAC and the time line of each MEDDEVAC (from operational commander request to entrance in role 2).

Results: A total of 1273 French military were evacuated from February to July 2016: 533 forward MEDDEVAC were analyzed. 12,4% were Alpha, 20,1% Bravo, 50,5% Charlie. War related injury represented 10,2% of MEDDEVAC. The median time for Alpha category MEDDEVAC patients was 145 min [100–251] for Bravo category patients 205 min [125–373] and 330 min [150–609] for Charlie. The median distance from the point of injury to role 2 was 126 km [90–205] for Alpha patients, 250 km [130–455] km for Bravo and 290 km [110–455] km for Charlie.

Conclusions: Patient evacuation in such a large area is a logistic and human challenge. Despite this, Bravo and Charlie patients were evacuated in NATO recommended time frame. However, due to distance, Alpha patients time frame was longer than this recommended by NATO organization. That's where French doctrine with forward medical teams embedded in the platform is relevant to mitigate this distance and time frame challenge.

© 2016 Elsevier Ltd. All rights reserved.

* Corresponding author.
 E-mail address: cyril.carfantan@gmail.com (C. Carfantan).

<http://dx.doi.org/10.1016/j.injury.2016.10.043>
 0020-1308/© 2016 Elsevier Ltd. All rights reserved.

Please cite this article in press as: Carfantan, et al., Forward medevac during Serval and Barkhane operations in Sahel: A registry study, Injury (2016), <http://dx.doi.org/10.1016/j.injury.2016.10.043>



SFAR
Société Française d'Anesthésie et de Réanimation

LE CONGRÈS

ANESTHÉSIE RÉANIMATION URGENCES DOULEUR

21-23 SEPT 2017 PALAIS DES CONGRÈS DE PARIS

www.sfar-lecongres.com

- Adaptation du SSA face aux délais allongés:

TRANSFUSION A L'AVANT

Pour voir la suite... rendez vous dans
l'espace réservé aux adhérents!