

Not enough of a good thing: Worsening of pneumococcal meningitis after corticosteroid

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Transparency Declaration

- I received a travel grant from Pfizer and Cubist to come to ECCMID a few years ago.
- I sometimes prescribe antibiotics, but I can't recall the last time I took any.
- Therefore, I don't think I have major conflicts of interest?

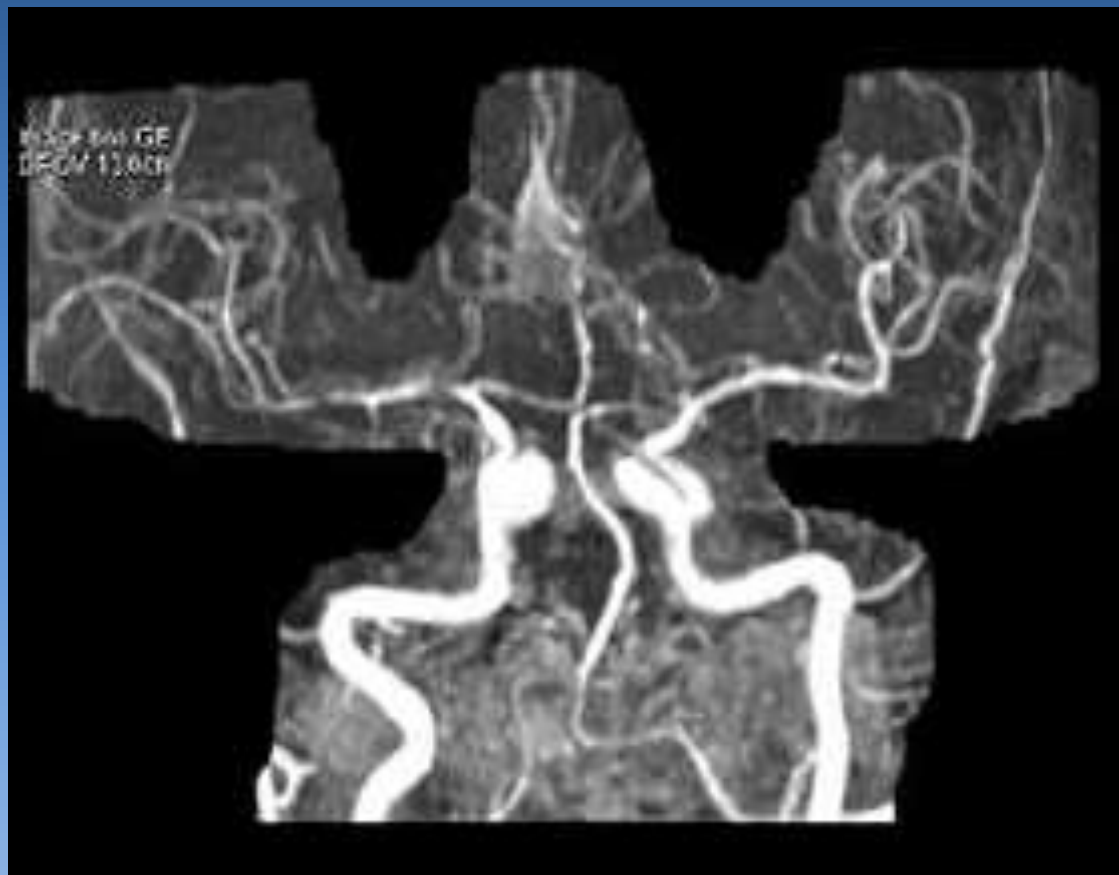
Once upon a time

- 53 year old Irish woman with a pneumococcal meningitis.
- Ceftriaxone + Dexamethason, with correct dosages and timing, according to guidelines.
- Fast and satisfying recovering under treatment, until Dexamethason discontinuation, on the 4th day.

Within 24h after DXM discontinuation

- Right hemiparesia with a pyramidal syndrome
- Agnosia
- Coma
- **MRI:** Supratentorial multiple bilateral foci of infarction predominant on the left side.
- **MR angiography:** Significant multiple bilateral stenosis. Proximal and distal segments of the middle cerebral arteries displayed an irregular wall -> Vasculitis

ARM



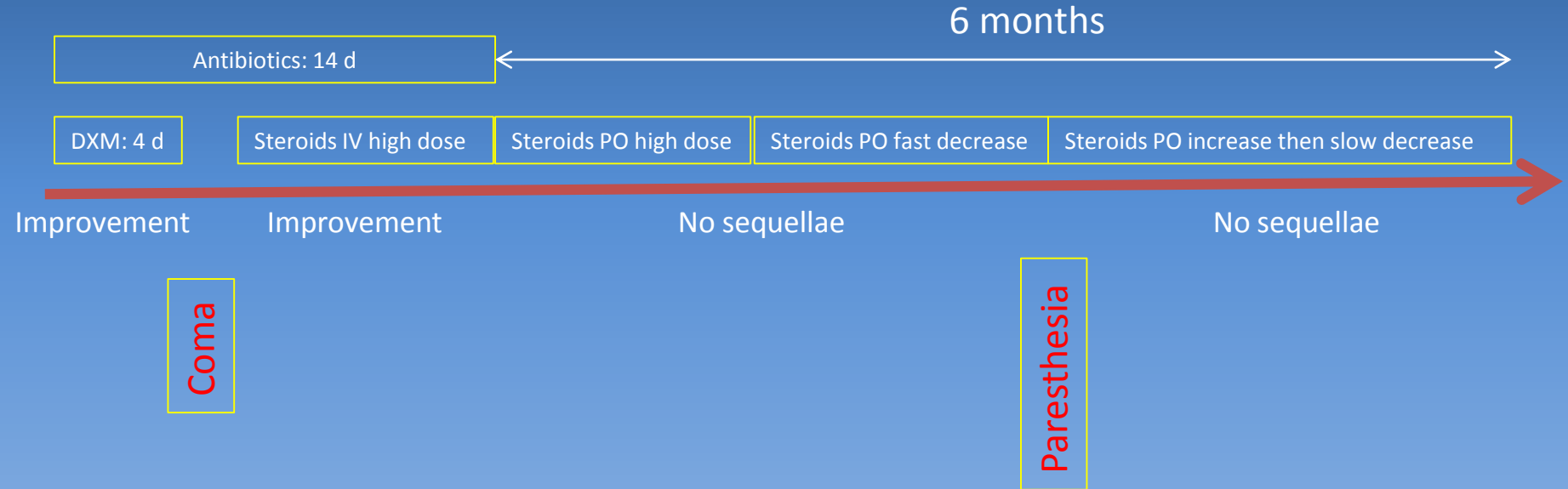
Salvage therapy

- MethylPrednisolone IV 1mg/kg/d
- Dramatic clinical improvement
- Radiological improvement
- 14 days of antibiotics, switch to oral prednisolone
- 6 weeks after ATB, prednisolone decrease 5mg/week.
- At 30mg/d (3 months after antibiotics): paresthesia
- Improvement at 40mg/d, paresthesia disappeared, then slower decrease.
- Prednisolone discontinuation 6 months after antibiotics.

ARM after Steroids reintroduction



Timeline



Call for cases

- 14 cases pneumococcal meningitis with worsening after DXM discontinuation, in spite of initial favourable evolution.
- 8 men, median age 57 y (39-74).
- 13 with cerebral vasculitis on CT-scan or MRI.

Median time to worsening after DXM

- 2 days (1-18)
- 9 patients before day 3: 4 deaths, 4 sequellae
- 5 patients after day 9: 1 death
- 2 different mechanisms?

DXM reintroduction

- 13/14 patients.
- Within 2 days (1-6).
- More favourable outcome?
 - Unclear
 - Maybe if reintroduction within a day, for at least one month.

DXM

- According to guidelines and RCT:
 - Beneficial up to the 4th day.
- Could it be beneficial beyond day 4, at least for some patients?

For who?

- Pneumococcal meningitis with adequate treatment.
 - Is there risk factors to identify individuals who would benefit of a prolongation beyond day 4?
- Deterioration after DXM discontinuation
 - Who will benefit from reintroduction if worsening occur?

DEXALONG study

- International cohort of retrospective cases:
 - ACUTE COMMUNAUTARY PNEUMOCOCCAL MENINGITIS (*Streptococcus pneumoniae* isolation in cerebral spinal fluid CSF (microscopy, culture, PCR), or CSF in favor associated with a positive blood culture)
 - INITIAL CORTICOSTEROIDS REGIMEN consistent with guidelines
 - WORSENING BETWEEN CORTICOSTEROIDS WITHDRAWAL AND ANTIBIOTICS'ONE Hemodynamic and/or neurological and/or infectious (without another infectious disease identified).
- To be compared with a control group from the COMBAT study (450 patients)

dexalong.com

The screenshot shows a web browser window displaying the homepage of dexalong.com. The browser's address bar shows the URL "dexalong.com/index.php/en/". The page features a large header with the word "DEXALONG" in a bold, italicized font. Below the header, there is a "HOME" section with a horizontal line. The main content area contains a welcome message and three numbered criteria for patient registration. To the right, there is a "Menu principal" with a "Home" link, a "Login form" section with input fields for "Username" and "Password", a "Remember Me" checkbox, and a "Log in" button. At the bottom of the page, there are three links: "Forgot your username?", "Forgot your password?", and "Create an account". The browser's taskbar at the bottom shows various application icons and the system clock indicating the date and time.

Non sécurisé : dexalong.com/index.php/en/

DEXALONG

HOME

Welcome to the DEXALONG study website.

It aims at collecting case report from patients with pneumococcal meningitis who presented a worsening after steroids discontinuation. Inclusion criteria are therefore:

1. **ACUTE COMMUNAL/TARY PNEUMOCOCCAL MENINGITIS** (Streptococcus pneumoniae isolation in cerebral spinal fluid CSF (microscopy, culture, PCR), or CSF w/ fever associated with a positive blood culture)
2. **INITIAL CORTICOSTEROIDS REGIMEN** consistent with guidelines
3. **WORSENING BETWEEN CORTICOSTEROIDS WITHDRAWAL AND ANTIBIOTICS ONE** Hemodynamic and/or neurological and/or infectious (without another infectious disease identified).

If you have patients fulfilling these 3 criteria, you should register on the website (on the right) and complete a form.

If you have any question, you can contact Dr. Guillemette Delvaux or Dr. Tilgall Garcia (click on the name to send an email).

Menu principal

- Home

Login form

Username
Username

Password
Password

Remember Me

Log in

- Forgot your username?
- Forgot your password?
- Create an account

If you have similar cases

- dexalong.com (currently in testing phase, functional within a month)
- Or contact us directly:
 - beraudguillaume@gmail.com
 - magali.garcia@chu-poitiers.fr

Thank you for your attention

