

# Asymptomatic Neurosyphilis is Unlikely in HIV Infected Patients After Treatment of Early Syphilis with Benzathine Penicillin G

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# Background

- Return of early syphilis to Manchester (2000)
- BASHH: *Treat HIV+ as neurosyphilis*  
*17-21 days of procaine penicillin G (PPG)*
- Apr 2003 – our unit switched to single dose benzathine penicillin G (BPG)
- Concerns about effectiveness of BPG

# Background (2)

- Pre-treatment risk of NS in HIV+<sup>1</sup>
- CD4  $\leq$  350 = **3-fold** increased risk
- RPR > 1:16 = **6-fold** increased risk
- RPR > 1:16 + CD4 RR = **18-fold** increased risk

<sup>1</sup> Marra CM et al. (2004) Cerebrospinal fluid abnormalities in patients with syphilis: association with clinical and laboratory features. *J Infect Dis* 2004

# Aims

To exclude ANS post-BPG in HIV+ patients

# Methods

- Oct 2004 – Feb 2013
- 64 patients
- Prospective study
- Post-treatment LP

## Entry Criteria

- Early syphilis
- $CD4 \leq 350$   
and/or RPR >1:16
- Excluded if clinical neurosyphilis
- Excluded if CI to LP

## Diagnostic Criteria

- CSF RPR +  
**or**
- CSF WBC >20  
**plus**  
CSF TPPA > 1:320

# Analysis

Male	64 (100%)
MSM	64 (100%)
Age (median)	40 (24-55)
White British	56 (88%)

Serum RPR >1:16	42
CD4 ≤350	22
RPR>1:16 <b>AND</b> CD4≤350	17

Syphilis Stage	<div>Primary 12</div> <div>Secondary 26</div> <div>Early Latent 26</div>
Pre-treatment CD4 (median)	417 (84-1100)
On ART	39 (61%)
VL <40	31 (48%)
Time to LP (median)	8 months

# Results

No CSF abnormalities = 61 patients (95%)

ANS = 1 patient (prevalence 1.56%, CI 0.04 – 8.4)

CSF WBC >20 only = 2 patients

CSF WBC 0-5 = 49 (76%)

Positive CSF RPR = 0

# One patient diagnosed with ANS

## Diagnosis

- Secondary syphilis
- CD4 419mm VL 13,900
- RPR >1:128
- Standard BPG
- Serological cure

## 6 months

- CSF lymphocytes 45
- CSF RPR 0
- CSF TPPA 1:1280
- PPG x 17 + probenecid
- Clinical re-evaluation

## 12 months

- On ART
- VL <40 CD4 451
- Repeat LP NAD

# Isolated CSF Pleocytosis

## 31 yrs Secondary Syphilis

- CD4 396
- HIV VL 36,215
- CSF WBC 50
- CSF RPR 0 TPPA 0
- ART
- VL <40
- CSF WBC 5

## 37 yrs Primary Syphilis

- CD4 1072
- HIV VL <40
- CSF WBC 22
- CSF RPR 0 TPPA 0
- Acute Hep C at LP
- Declined further LP



# Summary

- Single dose BPG is effective treatment for early syphilis even in high-risk HIV+ patients
- Limitations
- Future Considerations
  - Standardise CSF diagnostic criteria
  - Other CSF markers of NS
  - *T. pallidum* typing