Anti-malarials and Health Outcomes in the ADF

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Psychology and Rehabilitation
Why we are here

- To provide transparency
- To tell you what we have done in response to your concerns
- To understand your concerns
- Discuss how Defence can help
- To encourage you to seek health care
- We care about your health – JHC priorities:
  - Making sure that members feel comfortable to ask for help and to access health care
  - Transition of health care post service
What we are **not** here to do

- Tell you that your recollections and experiences are wrong
- Tell you that your problems are not caused by mefloquine or tafenoquine
- Give you a definitive answer that your health problems are caused by one of these medications
- Be defensive or dismissive of your concerns
Scope

• Mefloquine use in the ADF
• Tafenoquine
• Defence response to date
• Management of complex mental health problems
• Outcomes of our literature review
• Accessing health care
Mefloquine

- Has been registered in Australia as an anti-malarial since 1988 and for prophylaxis since 1993
- First used (as was doxycycline) in ADF 1989 due to resistance to chloroquine and maloprim
  - Recommended by the National Health and Medical Research Council *Malaria Guidelines* in 1989
- Never used as first line treatment in ADF
  - Doxycycline chosen in 1990
  - Mefloquine second line in 1993; third line in 2006 after introduction of Malarone
- Different to other nations
Reasons for Doxycycline

- Effective – e.g. in Cambodia and Somalia
- Mefloquine resistance on Thai/Cambodia border
- Concerned re adverse effects
  - Mefloquine had neurotoxic effects (at the time thought to be 1:1300 to 1:1500)
- Mefloquine cannot be used in:
  - Past history of epilepsy, psychiatric disorders
  - Aircrew etc requiring fine coord/spatial discrimination
- Added benefits of doxy
Why the Timor Leste trial?

• 63 soldiers developed malaria on doxycycline during INTERFET
• Reasons:
  – compliance issues with daily dose?
  – development of doxy resistance?
• Needed to look at alternatives
• Mefloquine was approved, could be given weekly and was in common use by allies
The Trial

• Trial cleared by the Australian Defence Human Research Ethics Committee (ADHREC)
• All participants signed a detailed consent form
• Results of trial published in scientific literature
• Similar rate of side effects overall but 3 individuals on mefloquine developed serious adverse events
  – 2 had undeclared pre-existing problems
• Over 90% said would take mefloquine again
• All those who completed the trial were followed up at the end of the trial, then in routine ADF health surveillance
• Outcome – doxycycline and mefloquine were equally effective therefore mefloquine remained second line
Mefloquine use overall

- From 2000-2015 659 ADF members were prescribed mefloquine outside of trials = total of 1897

<table>
<thead>
<tr>
<th>Year</th>
<th>Mefloquine</th>
<th>Malarone</th>
<th>Doxy*</th>
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<table>
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<th>Year</th>
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<th>Malarone</th>
<th>Doxy*</th>
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<td>25,841</td>
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<td>2010</td>
<td>14,393</td>
<td>29,287</td>
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* Doxycycline is an antibiotic and is used for many other purposes
The Loading Dose

• Acknowledge that it is not specifically mentioned in the drug company information in Australia but
  – recommended in the literature
  – Listed in other countries e.g. NZ

• Reasons for a loading dose
  – Ensure adequate protection before deployment, especially in rapid deployments
  – Safety - monitor side effects in safe environment
• Malaria resistance continues to develop
• Tafenoquine is not related to mefloquine – it is related to primaquine
• Earlier studies in >1000 personnel showed promise in terms of side effects & effectiveness

• Why the ADF?
  – concerns about doxy in Timor Leste
  – Mefloquine was the only fall back option at that time
  – opportunity to test a new medication with less side effects
Tafenoquine Trials

- Not registered with the Therapeutic Good Authority (TGA) but:
  - trials legal if cleared by ethics committee – cleared by ADHREC
  - TGA Special Access given for the treatment trial
- No serious adverse events seen in trials; no serious neuropsychiatric effects reported in literature
- Still undergoing testing elsewhere

<table>
<thead>
<tr>
<th>Years</th>
<th>Location</th>
<th>Use</th>
<th>Tested against</th>
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<tbody>
<tr>
<td>1998-9 2000</td>
<td>Bougainville Timor Leste</td>
<td>Eradication post deployment (3 days)</td>
<td>Primaquine (14 days)</td>
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<td>Timor Leste</td>
<td>Prophylaxis</td>
<td>Mefloquine</td>
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<td>Australia</td>
<td>Treatment of relapsing malaria</td>
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What have we done?

Reviews

• Review of ADF suicide database from 2000 – no individuals identified as taking mefloquine (as at 9 Mar)
• Review of Medical Employment Classification outcomes between the study groups*:
  – no significant difference in fitness for service
  – no significant difference in the incidence of a PTSD diagnosis
• NOTE: we only have data for serving members
• Literature review – Prof. Sandy McFarlane
  – neuropsychiatric effects, especially long term effects
  – Diagnosis and treatment options
  – Received final draft on Friday

* overall, doxy vs mefloquine; tafenoquine vs mefloquine
What have we done?

**Information**

- Web resource
- DEFGRAM, “spotlights”
- Service newspaper articles
- Releasing individual trial records
- Contact address: ADF.Malaria@defence.gov.au
- **Clinical Guidelines for providing appropriate care to ADF members presenting with neuropsychiatric symptoms and a history of having been prescribed mefloquine**
  - Shared with DVA

Additional Resources

• Health outcome analysis
• Mefloquine loading dose
• 1989 Studies
• General information on clinical trials in Australia
• Health monitoring in the ADF
• RMA SOPs
• FAQ from the ADF malaria mailbox
• More information on tafenoquine use
• Working on
  – Changes as suggested by Dr Quinn
  – Literature Review (when finalised)

What anti-malarial medications were used in the 1970s and 1980s?

What insecticides were used in mosquito fogging in RAAF Butterworth in the 1980s?
Additional points to note

• There was never any intention to destroy trial records – all are kept indefinitely
• An IGADF Inquiry is underway in response to a whistleblower submission – this is an independent inquiry relating to the trials
• We are not hiding anything – just presenting what we know
SOMETIMES THE TOUGHEST BATTLES ARE FACED WITHIN

Living under a dark cloud?
Minimise the impact of mental health symptoms, seek help early

Mental health conditions are treatable
SEEK HELP
Speak to your local Medical Officer, Psychologist, Chaplain or your Chain of Command for advice
Complex Mental Health Problems

• Mental illness and psychiatric diagnosis can be complex – not always black or white

• Biological, psychological and social factors can contribute to cause and how the illness presents

• Sometimes diagnosis can be provisional and needs to change over time
Initial Outcomes

• Side effects were known early, however the continuation of effects after stopping is a more recent concern
• There are theories on how mefloquine might cause neuropsychiatric effects based on its underlying action
• There are varying conclusions about its potential toxicity
• The challenge is that there is no specific way to diagnose it as many of the symptoms may be shared with conditions such as PTSD
• There is no specific treatment except to treat the symptoms (and cease the drug when symptoms develop)
The literature does not provide any specific directions for the treatment of the psychiatric side effects of mefloquine…other than cessation of the drug. Rather the underlying symptomatic disorder should be treated as is the general practice of psychiatry.
Literature Review
Next Steps

• There are some questions that have not been addressed in the literature:
  – Are some individuals pre-disposed to adverse effects?
  – Does mefloquine modify the response to trauma?
• The answers are not clear at present therefore more studies may be required
• Data previously collected as part of Defence’s deployment health studies could help answer these questions
Taking the step to reach out

- **Understanding** that you need assistance can take time
- Asking for help takes **courage**
- Specific **symptoms and effects** can vary between individuals
- **Treatments** may also need to vary to match individual needs and experiences
- Most times treatments need to **address the symptoms** no matter what the cause
Barriers to care

• Stigma surrounding mental health problems
• Sometimes problems aren’t apparent early but develop over time
• We are aware of the ADF culture of not reporting problems while serving
  – Fear and lack of trust – “career suicide”
• The result is:
  – people don’t come forward early enough
  – the condition may then be much harder to treat
Mental health care in the ADF

- Promoting good mental health and wellbeing through leadership at all levels
- A culture that supports personnel to recognise mental health issues and assist themselves and others
- Prepare to meet unique risks of military service.
- Evidenced based treatment and recovery
- Partnerships between individuals, families, command and health providers
- Innovation and research to improve understanding of needs and delivery of care
- Support effective transition and continuity of care for those leaving the ADF
Access to care in the ADF

• Garrison Health Services
  – medical officers
  – Mental health professionals
• Rehabilitation consultants
• Access to additional specialist mental health professionals
• ADF Centre for Mental Health (Specialist advice)
• Accredited PTSD treatment programs
• Veterans and Veterans Families Counselling Service (VVCS)
• 24 hour support lines
DVA Support Services

- VVCS
- The Stepping Out Program
- ADF Post-discharge GP Health Assessment
- Non-Liability Health Care treatment for certain mental and physical health conditions without the need for the conditions to be accepted as related to service
- Rehabilitation Services
- Submission of claims
  - Access via On Base Advisory Service (OBAS) for serving members
Metloquine in the RMA
Statements of Principles

Recognised Conditions
• Bipolar disorder
• Depressive disorder
• Epileptic seizure
• Heart block
• Myasthenia gravis
• Peripheral neuropathy
• Psoriasis
• Sensorineural hearing loss
• Tinnitus
• Trigeminal neuropathy

Reviewing:
• Anxiety disorder
• Panic disorder
• Suicide and attempted suicide
Remember

• Seek treatment and help regardless of the cause
  – as early as possible but remember it’s never too late
• If treatment hasn’t worked don’t give up
  – some treatments work for some and not others
  – sometimes it takes more than one approach
• Put in your DVA claim
• If you’re not getting appropriate care
  – Talk to your doctor
  – Contact JHC: adf.malaria@defence.gov.au
ADF Health & Wellbeing Portal

Welcome to the Joint Health Command ADF Health and Wellbeing Portal Fighting Fit. The Portal will direct you to a wide range of Defence websites containing information on ADF Health and Mental Health services and supports, as well as referencing a number of reputable external resources. The Portal is distinguished by the purple Fighting Fit bar shown above this message. If the bar is not visible, you have been directed to a site outside the Portal.

Fighting Fit is a resource for all current and ex-serving ADF Members and their families. There are also targeted resources for specific personnel and situations, including Commanders, Reservists, ADF Members preparing for deployment, veterans, and health professionals.
Questions?