MESAFE
MEntal health for aviation SAFEty

EASA
European Union Aviation Safety Agency

Psychopharmaceuticals - compatibility with aviation duties

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MESAFE Final Dissemination Event

The content of this presentation reflects the research project, and not the opinion of EASA.

Introduction

- Psychiatrist, specialised in aviation mental health
- Background in Law
- Clinical Director Transparant Mental Healthcare Leiden & Independent consultant occupational health providers (focus on aviation)
- Expert EASA MESAFE-project
- Advisory Board ESAM, scientific committee Dutch association aerospace medicine, legal committee Dutch association of psychiatrists

Contents

- (Fictional) Case that will come back
- General principles with regards to biological treatment
- Illustrated by just culture principles
- Specific advices
- Remarks on discontinuation of biological treatment
- Take-home messages

Ms. P, 33 years

- First-officer of a medium size European airline. Was about to start training to become captain, but became pregnant.
- Sick leave for 8 months due to depressive disorder. Depressed mood, sleeping and concentration difficulties, no suicidal feelings.
- Started with burn-out symptoms after a spontaneous abortion at 22 weeks gestation and death of her mother.
- After 14 sessions CBT due to lack of improvement started sertraline by psychiatrist.
- Now 4 months on 100mg, once monthly follow-up CBT-session, consolidation phase.
- Symptoms in full-remission for 2-3 months, remission is confirmed by independent psychiatric assesment.
- Medical has lapsed, now visits to AME, wants to fly again.
- Physical health is good. No history of mental health problems.

What is the main aeromedical challenge?

- The risk due to the sertraline usage?
- The risk due to a new depressive episode?

Treatment & risks

- In general (stable) treatment will mitigate risks
- Risks caused by disorder and side-effects treatment and benefits
- *Total compatibility with flight duties = compatibility of the underlying disorder x compatibility of the biological treatment (risks and side-effects) x benefits of the biological treatment.*
- **It’s not about yes or no, it’s about the risk**

Some considerations

- The underlying disorder, its risks and especially the risk of (unexpected) relapses
- Stable dosage for at least 4 weeks?
- Side effects of treatment (especially on concentration and attention) and long-term risks
- Benefits of the medication (risks that are diminished)
- Is the medication part of a larger treatment plan?
- Are the symptoms in remission?

Some advices with regards to SSRI treatment

- Treatment by or under supervision of a psychiatrist.
- During the starting phase no signs of bipolarity or increased aggression or suicidality.
- Jointly supported by the mental healthcare provider, AME and occupational physician.
- Patient allows the free sharing of information between mental healthcare providers, AME and the occupational physician.
- At least one family member, friend or relative of the patient is involved.

Some advices with regards to SSRI treatment (ctnd)

- Stable dosage for a reasonable amount of time.
- The disorder is in remission for a reasonable period of time.
- Side-effects are stable and tolerable, no interactions with other drugs.
- There are no sleep complaints.
- An ECG has been made and is OK.
- If applicable, along with the pharmacological treatment, psychotherapy is offered.

Some advices with regards to SSRI treatment (cntd)

- During changes of the dosage or when stopping, the patient should not fly or perform ATC duties.
- Dose changes, stopping and tapering of the medication need to be supervised by a psychiatrist.
- Except in case of severe side-effects or medical necessity, tapered gradually.
- Sufficient attention should be paid to relapse prevention.

Back to ms P.

Is certification possible?

Other psychotropic drugs than SSRI, things to consider

- Sedation is a side-effect of many psychotropic drugs (antypsychotics, benzodiazepines)
- Risk of misuse and/or dependency (benzodiazepines, methylphenidate)
- Other mental side-effects, especially during starting phase (psychosis, mania)
- Long-term side effects
- **Likeliest main issue: risk of the disorder**

Intermezzo 1: Attention Deficit Hyperactivity Disorder

- Prevalence increasing, especially in young people
- Farmacological treatment: stimulant (methylphenidate, dexamphetamine, others) acting 3-8 hours
  - No constant levels during day
- Stimulant effect and short acting time make compatibility with aviation duties difficult
- Risk of dependency, difficulties with international travel
- Even more difficult: problem with concentration and attention
- Repeat diagnostics? Neuropsychological assesment?

Intermezzo 2: benzodiazepines

- ‘Tranquilizers’
- Can help to aid sleep
- Influence on attention and concentration minimal after working-time
- Considered safe if suffienct time before commencing duties
- MAIN QUESTION: why are they needed? Just to help sleeping? Or to control emotions?
- Risk of dependency

Back to our case, 2 years later

- Ms. P returned to flying, everything went well.
- Now, she visits AME for annual medical assesment.
- Question: *‘I want to become pregnant again. I consider to stop this sertraline, feels better for the baby’. ‘And it will be easier to maintain my medical in the future.’*
- What should the AME advise?

An advice for ms P.

- A decision on (dis)continuation of treatment should be made by patient and treating clinician
- Based on what is optimal care, not aeromedical arguments
- In general best care will cause lowest aeromedical risk
- For AME:
- Physical and emotional challenges of pregnancy
- Combination with restarting flying duties when rasing a young family
- → **influence on aeromedical risk estimation, cooperation with MHS**

A Just Culture - (MESAFE definition)

- A safety culture in which all safety sensitive personnel can report mental issues
- A supportive atmosphere without a risk of job- or income loss
- Only reliable diagnostic tools are used to detect mental health risks
- A maximum effort is made to ensure that employees can return to their job safely
- Balancing the rights and duties of all involved

Five years later

- After a tripartide discussion with her treating psychiatrist, ms P. decides to continue the sertraline in order to mitigate the risk of a relapse of the depression or a post partum depression.

- Becomes pregnant after six months, office work in line with company procedures, healthy son is born, return to flying afterwards.

- Continuation of treatment, 2,5 years later birth of healthy daughter.

- When daughter is two years, she wants to taper the medication.

Discontinuing the medication

- After a new tripartide consultation with het psychiatrist, a tapering plan is made.
- Risk of relapse (+/- 50%) discussed.
- Sertraline dosage will decrease by 25mg per 3 months (1 year in total). After each dosage change, 4 weeks on ground, consultation with occupational physician afterwards.
- Monthly follow-up with psychiatrist.
- Discontinuation uneventful. Low frequency follow-up visits with psychiatrists for three more years, no relapse. She continues to fly succesfully for quite some years.

Conclusions and take home

Think in risks

Total compatibility with flight duties = compatibility of the underlying disorder x compatibility of the biological treatment (risks and side-effects) x benefits of the biological treatment.

Optimal treatment comes first

Biological treatment? → Risk estimation

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