

Seafarer with hyperactivity disorder on amphetamine

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ABSTRACT

A general practitioner decided that a first-time Scandinavian seafarer with hyperactivity disorder, reasonably well-regulated on dextroamphetamine, was fit for unrestricted work at sea. Carrying amphetamine across US borders is drug smuggling, and when the cruise ship could not supply his medication from local ports, his behaviour became so erratic that he had to be signed off. Doctors providing medical fitness certificates for work at sea must understand the special requirements of seafaring life, know details about medicine use restrictions aboard, and be familiar with international import bans and national prescription regulations for controlled substances.

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Key words: cruise ship medicine, pre-employment medical examination, attention deficit/hyperactivity disorder ADHD, dextroamphetamine

CASE REPORT

A young man from Scandinavia was hired as a maritime officer on a ship carrying a flag of convenience and doing one-week-cruises from a US port. This was his first time at sea and he saw a general practitioner in his home country for his pre-employment medical examination (PEME). Not authorised by the country's maritime authorities to perform national PEMEs, the physician had the seafarer fill out a 'personal declaration' in which he acknowledged that he had a 'psychiatric condition' and took medication. Under 'Comments' the examining physician referred to an enclosed document from the seafarer's psychiatrist stating the following:

'ICD-10 Hyperkinetic Disorder – F90.1. Mr. NN has had his condition since childhood, but he wasn't diagnosed until 2005 at a university hospital. He began treatment with a central stimulant. When he moved back to his home town, further prescription of these drugs has been made by me. His actual medication is dextroamphetamine 60–75 mg a day. If he starts working in the USA, he will be in need of a local US doctor to prescribe this medication, alternatively that he is allowed importing his medication from his home country. The first solution is the safest in most ways'.

All physical findings were normal, and the examining doctor's decision was: 'Fit for work'.

The seafarer only brought a small supply of his medication at sign-on, and when the ship could not supply him with dextroamphetamine, his behaviour soon became erratic to the extent that the ship's physician concluded that it was unsafe to keep him aboard. The seafarer was then sent ashore for a local psychiatric evaluation prior to medical sign-off and repatriation.

DISCUSSION

During the consultation the examining physician found the seafarer somewhat hyperactive but highly motivated to try to work at sea. Being stable on medication and thus fit for work ashore, the physician thought that he should also be able to work on a cruise ship, not being aware of any particular restrictions for seafaring.

The laws of most maritime countries require that all seafarers carry a valid medical certificate [1]. It shall ensure that the seafarer being examined is medically fit to perform his or her routine and emergency duties at sea safely and effectively and is not suffering from any medical

conditions likely to be aggravated by service at sea, to render him or her unfit for service or to endanger the health of other persons on board or the safety of the ship [1].

Major shipping nations have detailed requirements for approving doctors for conducting PEMEs for seafarers on their registered ships. The approved doctors act as agents of the national maritime authorities, and when assessing whether the published medical standards are met, they must follow the procedures set out in detailed manuals [2, 3]. The UK Approved Doctor's Manual [2] emphasizes that the occupational circumstances that apply at sea should be fully considered when a decision on a seafarer's medical fitness is taken. An unrestricted medical certificate will enable the seafarer to work anywhere in the world. The examining doctor should have knowledge of the living and working conditions on board ships and an understanding of the demands of the different types of work involved. Particular factors to take into account are:

- the potentially hazardous nature of seafaring, which calls for a high standard of health and continuing fitness;
- the restricted medical facilities likely to be available on board ship (few ships carry doctors, and first aid training for crews is limited);
- the likelihood of limited medical supplies and delay before full medical treatment is available;
- the possible difficulty of providing/replacing required medication; as a general rule a seafarer should not be accepted if the loss of a necessary medicine could precipitate the rapid deterioration of a medical condition;
- the limited crew complements, which mean that illness of one crew member may place a burden on others or compromise the safe and efficient working of the ship;
- the potential need for crew members to play a role in an emergency or emergency drill, which may involve strenuous physical activity in adverse conditions;
- the confined nature of life on board ship and the need to be able to live and work in a closed community;
- the likelihood that a seafarer will need to join and leave ships by air, which means that they should be free from any condition which precludes air travel or could be seriously affected by it;
- the especially high levels of physical fitness required for work on some vessels;
- the area of operation of the vessel; this and the effects of climate will affect the risk of diseases and the pattern of work and rest;
- the demands that work at sea, especially the effects of fatigue, poor management, or perceived injustice, which can have an adverse effect on mood, provoke mental distress (stress), and exacerbate pre-existing conditions, and the strain of emergencies at sea that can also lead to similar ill-effects [2].

While *national* fitness standards for seafarers vary widely, even flag of convenience registries demand PEME certificates in accordance with the International Convention on Standards and Training, Certification and Watchkeeping for Seafarers 1978, as amended (STCW), and the International Labour Organisation (ILO) Maritime Labour Convention, 2006 (MLC 2006) requirements [4]. ILO 'Guidelines on the medical examinations of seafarers' [1] provides practical advice on how to comply with these globally ratified conventions. On disorders of attention, e.g. attention-deficit/hyperactivity disorder (ADHD), it says that a certificate should not be issued if the condition is considered to have safety-critical consequences.

ADHD is a childhood onset psychiatric disorder that can persist into adulthood in up to 50% of patients. It is characterised by hyperactivity, mood instability, irritability, difficulties in maintaining attention, lack of organisation, and impulsive behaviour [5]. Untreated adults with ADHD often have chaotic lifestyles, may appear to be disorganised, and may rely on non-prescribed drugs and alcohol to get by [6]. The Swedish Medical Products Agency recommends pharmacological treatment for ADHD only when other supportive interventions have failed, indicating that pharmacologic ADHD treatment most likely represents an indicator of the more severe cases of ADHD [7]. Central stimulants, such as amphetamines, are highly efficacious in the treatment of ADHD [8], and a Swedish study showed that rates of criminality were lower during periods when ADHD patients were receiving central stimulants [7].

Cognitive, behavioural, and mental health conditions are among the most difficult to assess during a clinical consultation [2]. However, in our patient both his hyperactivity diagnosis and his medication were known. He was deemed reasonably stable ashore while on a daily dose of dextro-amphetamine in a range that should be used only with caution, with frequent monitoring of side effects [8]. Proper psychiatric monitoring is unrealistic even on cruise ships with medical personnel aboard. Well-regulated ashore does not mean that the person will remain stable on a busy ship where numerous stress factors may adversely influence mental conditions as well as medication compliance. Risk of recurrence is likely to be increased at the time when any medication is reduced or stopped [2], as demonstrated in our patient.

There are many reservations concerning use of medication aboard [1–4]. The UK Approved Doctor's Manual [2] state that severe ADHD is unlikely to be compatible with work in any senior jobs at sea where vigilance is needed, and as the commonly used medication is also used as a drug of abuse, safe custody on board may be a problem. Furthermore, on UK-registered ships stimulants other than caffeine are not generally acceptable [2], while the use of medication that can be addictive is not permitted on Norwegian vessels [3].

A particular problem in our case was that amphetamine is a controlled substance all over the world and as such is subject to severe legal restrictions. Carrying even small amounts of amphetamine into the USA is a criminal act and may have grave consequences. Import of small amounts for personal medicinal use necessitates a special license, and medication for long-term use must be prescribed by a US physician with a special license [9]. It should be noted that ship's doctors are not authorised to order controlled substances for their medical practice aboard foreign ships from US drug stores in port. Also, the supply of any type of medicine to cruise ships in an American port causes logistical problems, especially during busy week-end turn-around.

Most shipping companies insist that all medicine use by crews must be registered by the Master – or on cruise vessels by the ship's doctor. Crewmembers tend to bring remedies from home for self-medication, but some of them contain substances that will turn urine drug tests positive. As a consequence of international 'zero tolerance' policies, crewmembers on most cruise ships are routinely tested – randomly and for cause. Use of medication that has not been approved and documented on board prior to a positive drug test is reason for summary disciplinary dismissal (breach of contract).

CONCLUSIONS

In conclusion, our case illustrates that declaring an ADHD patient on dextroamphetamine fit for work at sea may have serious consequences. Doctors performing PEMEs must have a clear understanding of the special requirements of seafaring life, know details about medicine use restrictions

aboard, and be familiar with international import bans and national prescription regulations for controlled substances.

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