

NEWS

NEWS in Brief

Nicotine withdrawal in smokers admitted to ICU linked to agitation.

Researchers from Caen University Hospital in France have reported that smokers who are forced to abstain from nicotine because of admission to an intensive care unit (ICU) are at increased risk for agitation – with the rate doubling as compared to non-smokers (64% and 32%, $P = 0.0005$).

The increased agitation resulted in more frequent accidental removal of catheters and tubes; and more frequent use of supplemental sedatives and analgesics, neuroleptics, and physical restraints ($P < 0.05$).

The researchers said that the results suggested there was a need to look specifically at patients with tobacco dependency, with a view for earlier intervention of behavioural disorders. Patients at risk could be identified by using the Fagerström Test of Nicotine Dependence (FTND) in ICU settings.

The researchers in France evaluated 144 consecutive adult patients who

required mechanical ventilation for more than 48 hours at 2 ICUs. Upon admission, tobacco addiction was measured using the FTND. 31% of the patients were active smokers (similar to their general population). Of these, 59% had a strong dependence on nicotine, and the rest were weakly dependent. The other patients had either never smoked, or had not smoked for at least six months prior to admission.


Agitation and delirium were assessed twice a day during ICU stay using, respectively, the Sedation-Agitation Scale and the Intensive Care Delirium Screening Checklist. Agitation was greater among smokers than non-smokers, regardless of nicotine dependence level; but the incidence of delirium was not different.

Using multivariate analysis, smoking was associated with a more than three times increased risk of agitation (OR 3.13, 95% CI 1.45 to 6.74, $P = 0.003$). A subgroup analysis of 28 smoker and non-smoker pairs matched by age,

gender, and alcoholism status confirmed the greater risk of agitation.

There was also no difference in nosocomial infections rates, number of sedation-free or ventilator-free days, length of ICU stay, or mortality.

The main limitations of the study included a lack of objective measurement of tobacco addiction; collection of tobacco smoking status and endpoints in a non-blinded manner; and the use of sedatives and analgesics and physical restraints might have occurred randomly.

The authors stated that it is not clear what the best way is to manage agitation in the ICU that is related to nicotine abstinence; and that a large, randomised trial is warranted. Nicotine-replacement therapy or pharmacologic treatment with clonidine or dexmedetomidine might work. 

Source: Lucidarme O, et al. Nicotine withdrawal and agitation in ventilated critically ill patients. *Crit Care* 2010; DOI: 10.1186/cc8954.