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Letter to Editor

Transesophageal echocardiography probe intubation or extubation: which side is generating more aerosols associated with spreading COVID-19 contamination?

Dear Editor

Transesophageal echocardiography (TEE) is totally considered as an aerosol generating procedure due to repeated advancement and withdrawal of its probe through aerodigestive tract. TEE probe intubation stimulates patient's gag reflex. In this letter to editor untoward aerosol generating reactions (AGR) during TEE probe intubation or extubation seems to be more prominent in cases with primarily healthy gag reflex compared to patients requiring intraoperative TEE who are on deep sedation state. Indeed, since the TEE probe extubation means termination of the procedure for practitioner, less caution might be paid at this time compared to the TEE probe intubation. Thus, we recheck patient' face to be covered properly by applied plastic apron before TEE probe extubation. Airborne aerosol particles play a fundamental role in the spreading of various air-borne respiratory diseases including COVID-19 infection (1). Among the aerosol generating procedures, transesophageal echocardiography (TEE) is considered as a good example due to repeated advancement and withdrawal of its probe through aerodigestive tract with the risk of COVID-19 transmission (2, 3). TEE probe intubation stimulates patient's gag reflex resulting in induction of untoward aerosol generating reactions (AGRs) such as cough and sneezing in some cases, especially in the setting of inappropriate conscious sedation. Elimination of patient's gag reflex using spraying of local anesthesia and intravenous sedation is a fundamental step for this purpose (4).

Cases with appropriately suppressed gag reflex seem to be less likely to generate unwanted AGRs during TEE probe intubation. In the case of TEE probe extubation, if the procedure is terminated before tapering or vanishing, the impact of the appropriately induced conscious sedation based on patient's age, body surface area and left ventricular function due to the long-lasting TEE for getting satisfying conclusions, it supposedly would be associated with more chance of observed untoward AGRs. Untoward AGR during TEE probe intubation or extubation seems to be more prominent in cases with primarily healthy gag reflex compared to patients requiring intraoperative TEE who are on deep sedation state.

In cooperative patients, we did not observe remarkable ARGs in most cases during both TEE probe intubation and or extubation. Although, in un-cooperative cases, anxious individuals and obsess patients, we observed more untoward ARGs during TEE probe extubation than intubation in our echo lab which means it is essential to be prepared well for a sudden aerosol burst. Indeed, since the TEE probe extubation means termination of the procedure for practitioner, less caution might be paid at this time compared to the TEE probe intubation. Thus, we recheck patient' face to be covered properly by applied plastic apron before TEE robe extubation (5). But it should be kept in mind that this subject is an echo lab dependent matter that needs to be evaluated in person to be assured more about the safety of personnel.

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