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Smoking Has Effects on MicroRNAs and Pulmonary Hypertension

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To the editor,

We have read with great interest the article which was about association between microRNA-21 (miR-21) levels and right ventricular functions in patients with Group 3 pulmonary hypertension. It is reported that elevated levels of miR-21 is correlated with worse right ventricular functions and worse clinical outcomes.[1]

Chronic obstructive pulmonary disease (COPD) is one of the most common causes of Group 3 pulmonary hypertension. Smoking is the main underlying reason for COPD development.[2] MicroRNAs are small noncoding RNAs and they act via bindig 3'UTR region of the mRNAs. Smoking has effects on expression of several microRNAs. It is shown that heavy smokers have higher miR-21 leves than healthy controls and higher miR-21 levels are predictor of COPD development.[3] An animal study which was conducted on apolipoprotein E4 knocked out mice showed that heavy smoking was associated with increased expression of miR-21 levels and atherosclerosis.[4]

To conlcude, as smoking has effects on both microRNA levels and outcomes of pulmonary hypertension, it should be better if patients' smoking status would be assessed.

DECLARATION OF CONFLICT OF INTEREST

All the authors declare no conflict of interest.

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