A New Device for Bronchoscopy for Better Protection

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Abstract

Introduction: During the COVID-19 pandemic, the risk of transmission of SARS-CoV-2 has not been precisely known in bronchoscopy procedures. We have designed a cabinet device called Ankara University Bronchoscopy Cabinet (Aubrocab®) to protect healthcare. In this study, we aimed to evaluate preventing effect of Aubrocab® on aerosol spreading by measuring the number of particles in the bronchoscopy suite. Methods: The patients were categorized into two groups as those who underwent bronchoscopy with and without Aubrocab®. We measured PM0.5 level just before and after the bronchoscopy procedure in the bronchoscopy suite. Results: A total of 82 patients, 62 of whom underwent bronchoscopy with Aubrocab®, were enrolled the study. The PM 0.5 level measured before bronchoscopy were similar in both groups, whereas the PM0.5 level measured just after bronchoscopy was significantly lower in the Aubrocab® group (42,603±8,632 vs 50,377±10,487, p=0.001). The analyses showed that the percent particle change (50.76 ± 19.91% vs 67.15 ± 24.24%, p=0.003) and the difference of the particle numbers between pre and post-procedure (13,638±4,292 and 19,501±5,891, p<0.001) were significantly lower in the Aubrocab® group. Conclusion: Our institution developed a barrier device named Aubrocab® which was shown to prevent excessive aerosol release in addition to routine precautions during bronchoscopy procedures.

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