

Hospital contamination

Qiu et al. investigated the [contamination](#) of antibiotic-resistant bacteria in the air of different departments in [hospitals](#).

From 2018.07 to 2021.06, 191 samples of air-conditioning filter dust in three hospitals were collected. Antibiotic-resistant bacteria were isolated from the accumulated dust. The drug sensitivity test was conducted for [Staphylococcus aureus](#), [Acinetobacter baumannii](#), and [Enterobacteriaceae](#).

A total of 119 samples were detected with antibiotic-resistant bacteria from 191 samples, and the detection rate was 62.30%. The detection rate of different departments from high to low was surgical ward(68.29%) >intensive care unit(ICU)(59.62%) >medical ward(57.92%). A total of 362 strains of antimicrobial-resistant organisms were isolated, mainly were [Acinetobacter](#)(28.73%), [Pseudomonas](#) (22.10%), [Bacillus](#)(22.10%), [Staphylococcus](#)(9.12%), etc. Among them, 72 strains of target organisms were detected, and the detection rate was 19.89%(72/362), the detection rate of different target bacteria from high to low was [Acinetobacter baumannii](#)(12.71%)> [Enterobacteriaceae](#)(4.72%)> [Staphylococcus aureus](#)(2.76%)($P<0.05$). The drug sensitivity test showed that 41 strains of antimicrobial-resistant organisms were detected, and the detection rate was 56.94%(41/72), including [carbapenem](#)-resistant [Acinetobacter baumannii](#)(CR-ABA), methicillin-resistant [Staphylococcus aureus](#)([MRSA](#)), carbapenem-resistant [Enterobacteriaceae](#)(CRE), etc. 24 strains of multidrug-resistant organisms(MDROs) were detected and the detection rate was 58.54%(24/41). The detection rate of different departments from high to low was ICU(80.00%)>medical ward(60.00%)>surgical ward(46.15%).

There was contamination by [Acinetobacter baumannii](#), [Staphylococcus aureus](#), and [Enterobacteriaceae](#) in the air of hospitals, some of them were MDROs, mainly detected in neurological ward, respiratory medical ward, thyroid and breast surgery ward, neurosurgery ward, cardiothoracic surgery ward, gallbladder surgical ICU and general ICU ¹⁾.

During the study period from November 2020 to May 2021, we found evidence of SARS-CoV-2 RNA in a small but important number of samples obtained in the surgical and obstetric operative environment. The finding of no detectable virus inside the masks worn by the health care teams would suggest a low risk of infection for health care workers using appropriate personal protective equipment ²⁾

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Qiu W, Xia Y, Gong L, Yuan F, Chen Q, Li J, Liang J, Tang F. [Antibiotic-resistant bacteria contamination in the air of different departments in hospital]. *Wei Sheng Yan Jiu*. 2022 Jul;51(4):617-623. Chinese. doi: 10.19813/j.cnki.weishengyanjiu.2022.04.020. PMID: 36047268.

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Lee PE, Kozak R, Alavi N, Mbareche H, Kung RC, Murphy KE, Perruzza D, Jarvi S, Salvant E, Ladhani NNN, Yee AJM, Gagnon LH, Jenkinson R, Liu GY. Detection of SARS-CoV-2 contamination in the operating room and birthing room setting: a cross-sectional study. *CMAJ Open*. 2022 May 24;10(2):E450-E459. doi: 10.9778/cmajo.20210321. PMID: 35609928; PMCID: PMC9259417.

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