

# Hubungan antara hasil swab nasoorofaring dan uji serologi terhadap luaran pasien dalam evaluasi masa rawat 14 hari pasien covid-19 di Rumah Sakit rujukan respirasi nasional Persahabatan = Association between nasooropharyngeal swab and serological test with the outcome during evaluation of covid-19 patient after 14-days admission at the national respiratory referral hospital Persahabatan

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## Abstrak

**Pendahuluan:** Pemeriksaan baku emas swab nasoorofaring dengan metode Reverse transcriptase polymerase chain reaction (RT-PCR) merupakan prosedur diagnostik yang dilakukan pada pasien dengan suspek COVID-19. Metode lain yang digunakan yaitu dengan pemeriksaan serologi yang mulai terbentuk dalam beberapa hari hingga minggu.

**Tujuan:** Untuk mengetahui hubungan antara hasil swab nasoorofaring dan uji serologi terhadap luaran pasien COVID-19 dalam evaluasi masa rawat 14 hari

**Metode:** Analisis observasional kohort retrospektif terhadap pasien COVID-19 yang dirawat di RS Rujukan Respirasi Nasional Persahabatan, Jakarta, Indonesia secara total sampling diperoleh dari bulan Maret 2020 sampai Mei 2020. Kami meninjau rekam medis 132 pasien dengan diagnosis probable case dan confirmed case COVID-19 yang memenuhi kriteria inklusi.

**Hasil:** Sebanyak 132 pasien yang termasuk dalam penelitian ini, didominasi oleh laki-laki sebanyak 51,5% dengan usia rerata 50,23 tahun. Derajat pneumonia berturut-turut yaitu derajat ringan, sedang, dan berat (17,4%, 57,6%, dan 25,0%). Proporsi pasien dengan komorbid sebanyak 71,2%. Proporsi penggunaan alat bantu napas terbanyak yaitu penggunaan kanula hidung (69,7%) diikuti berturut-turut oleh Ventilator, non rebreathing mask dan high flow nasal cannule (13,6%, 9,1% dan 7,6%).. Proporsi kematian sebesar 18,3%, dengan proporsi kematian pada confirmed case sebanyak 21,3% dan probable case sebanyak 19,3%. Tingkat kematian pada confirmed case berkorelasi terhadap jenis kelamin laki-laki ( $p=0,009$ ), derajat pneumonia berat ( $p=0,000$ ), penggunaan alat bantu napas bukan kanula hidung ( $p=0,000$ ) dan komorbid ( $p=0,021$ ). Tingkat kematian pada probable case berkorelasi dengan derajat pneumonia berat ( $p=0,000$ ), penggunaan alat bantu napas bukan kanula hidung ( $p=0,000$ ).

**Kesimpulan:** Kombinasi penggunaan swab nasoorofaring dan hasil uji serologi dapat memprediksi luaran pasien COVID-19 dalam evaluasi masa rawat 14 hari. Derajat pneumonia berat dan penggunaan alat bantu napas bukan kanula hidung merupakan prediktor buruk terhadap luaran pasien COVID-19.

.....Introduction: Reverse transcriptase polymerase chain reaction (RT-PCR) to detect SARS- CoV-2 is a gold standard method in a patient with suspected COVID-19 and achievable by means of nasopharyngeal and oropharyngeal swab. Serological test is another method to detect the antibody which is produced in a several days or week.

**Aims:** To determine the association between nasooropharyngeal swab and serological test to predict the mortality of COVID-19 patient after 14-days admission.

**Methods:** We performed an observational retrospective cohort analysis of COVID-19 patients treated at National Respiratory Referral Hospital Persahabatan Jakarta, Indonesia. Subjects by means of total sampling were COVID-19 patients between March to May 2020. We reviewed the medical records of 132 patients categorized as probable and confirmed cases whom met the inclusion criteria. Their 14-days course of the treatment were observed.

**Results:** We included 132 patients, which dominated by males (51.5%) with mean age of

50.23 years old. Cases were mild pneumonia, moderate pneumonia, and severe pneumonia (17.4%, 57.6%, and 25.0%, respectively). Most patients presented with comorbidities (71,2%). Most patients required oxygen supplementation by nasal cannula (69.7%), followed by mechanical ventilator, non-rebreathing mask, and high flow nasal cannula (13.6%, 9.1%, and 7.6%, respectively). Patient deaths were 18.3%, including 21.3% among confirmed cases and 19.3% among probable cases. Mortality among confirmed case were correlated with male sex ( $p=0.009$ ), severe pneumonia ( $p=0.000$ ), supplemental oxygen delivery requiring device other than nasal cannula ( $p=0.000$ ), and comorbidities ( $p=0.021$ ). Mortality among probable cases were correlated with severe pneumonia ( $p=0.000$ ), and supplemental oxygen delivery requiring device other than nasal cannula ( $p=0.000$ ).

**Conclusions:** Combination of nasooropharyngeal swab and serological test results predicted the 14-days outcomes of COVID-19 patients. Severe pneumonia and supplemental oxygen delivery requiring device other than nasal cannula were predictors of poor COVID-19 outcomes as observed from our study.