

RELATIONSHIP SINONASAL ANATOMIC VARIANTS WITH IMAGING CT SCAN OF RHINOSINUSITIS AND WITHOUT RHINOSINUSITIS

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ABSTRACT

Background: Nasal and paranasal anatomical variants can cause ostial obstruction, which interferes with mucus drainage and causes rhinosinusitis, and can be a predictor of chronic rhinosinusitis.

Objective: Know the correlation between nasal and paranasal anatomical variants with rhinosinusitis.

Materials and Methods: This study was an observational study of association analysis with a cross-sectional design with retrospective non-random consecutive sampling. The study was conducted at the Dr. Sardjito Yogyakarta with a study sample from January 2017 - December 2018. The research subjects were patients who had undergone CT Paranasal examination. An assessment of the presence of sinonasal and rhinosinusitis anatomical variants was carried out, followed by an analysis by Chi square test to determine the relationship between sinonasal and rhinosinusitis anatomical variants.

Results: 65 subjects were found, 48% were male and 49.2% were female. Age range from 14 to 78 years. Chi square test of this study found the relationship between right uncinatus processus insertion with right frontal sinusitis ($p = 0.000$), degree of nasal septum deviation with left frontal sinusitis ($p = 0.020$), right uncinatus processus insertion with right ethmoidalis sinusitis ($p = 0.008$), left agger nasion and sinusitis ethmoidalis ($p = 0.029^S$), pneumatization of right nasal concha with acute rhinosinusitis ($p = 0.033$) and right insertion uncinatus process with acute rhinosinusitis ($p = 0.018$). Statistical analysis between other anatomical variants and rhinosinusitis gives a value of $p > 0.05$.

Conclusion: There is a significant relationship between insertion of the right uncinatus processus with right frontal sinusitis, degrees of deviation of the nasal septum with left frontalis sinusitis, insertion of the right uncinatus processus with the right ethmoidalis sinusitis, left agger nasion and ethmoidalis sinusitis, pneumatization of the right media nasal concha with acute rhinosinusitis, insertion of the right uncinatus processus with acute rhinosinusitis.

Keywords: Paranasal CT, anatomical variants, rhinosinusitis.

HUBUNGAN VARIAN ANATOMI SINONASAL DENGAN GAMBARAN CT SCAN RHINOSINUSITIS DAN TANPA RHINOSINUSITIS

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INTISARI

Latar Belakang: Varian anatomi hidung dan paranasal dapat menyebabkan obstruksi ostial, yang mengganggu drainase lendir dan menyebabkan rhinosinusitis, serta dapat menjadi prediktor rhinosinusitis kronis.

Tujuan: Mengetahui korelasi antara varian anatomi hidung dan paranasal dengan rhinosinusitis.

Bahan dan Cara: Penelitian ini adalah studi observasional analisis asosiasi dengan desain *cross-sectional* dengan pengambilan data retrospektif *non-random consecutive sampling*. Penelitian dilakukan di RSUP Dr. Sardjito Yogyakarta dengan sampel penelitian dari bulan Januari 2017 – Desember 2018. Subjek penelitian adalah pasien yang telah menjalani pemeriksaan CT Paranasal. Dilakukan penilaian adanya varian anatomi sinonasal dan rhinosinusitis, dilanjutkan analisa dengan *Chi square test* untuk mengetahui hubungan varian anatomi sinonasal dan rhinosinusitis.

Hasil: Didapatkan 65 subjek, 48% laki-laki dan 49.2 % perempuan. Rentang usia dari 14 hingga 78 tahun. Uji *Chi square* penelitian ini didapatkan hubungan insersi processus uncinatus kanan dengan sinusitis frontalis kanan ($p= 0.000$), derajat deviasi septum nasi dengan sinusitis frontalis kiri ($p= 0.020$), insersi processus uncinatus kanan dengan sinusitis ethmoidalis kanan ($p= 0.008$), agger nasi kiri dan sinusitis ethmoidalis sinistra ($p= 0.029^s$), pneumatisasi concha nasalis media kanan dengan rhinosinusitis akut ($p= 0.033$) serta insersi processus uncinatus kanan dengan rhinosinusitis akut ($p= 0.018$). Analisa statistik antara varian anatomi yang lain dengan rhinosinusitis memberikan nilai $p > 0.05$.

Kesimpulan: Terdapat hubungan bermakna antara insersi processus uncinatus kanan dengan sinusitis frontalis kanan, derajat deviasi septum nasi dengan sinusitis frontalis kiri, insersi processus uncinatus kanan dengan sinusitis ethmoidalis kanan, agger nasi kiri dan sinusitis ethmoidalis sinistra, pneumatisasi concha nasalis media kanan dengan rhinosinusitis akut, insersi processus uncinatus kanan dengan rhinosinusitis akut.

Kata kunci: CT Paranasal, varian anatomi, rhinosinusitis