INTISARI

Latar Belakang: Mitral stenosis (MS) didefinisikan sebagai berkurangnya pembukaan pada katup mitral yang berakibat pada terganggunya pengisian ventrikel kiri jantung. Ekokardiografi secara luas telah digunakan baik dalam proses penentuan diagnosis maupun melihat prognosis dari penyakit mitral stenosis. Ekokardiografi juga memiliki peranan penting dalam mengetahui beratnya atau keparahan mitral stenosis beserta keterlibatan struktur anatominya. Meningkatnya derajat keparahan yang ditandai dengan menurunnya MVA berakibat pada peningkatan tekanan atrium kiri serta tekanan pada pembuluh darah pulmonal. Penurunan MVA juga disertai dengan peningkatan kejadian komplikasi MS berupa fibrilasi atrium, edema paru yang dapat berujung pada kematian.

Tujuan: Menganalisis keparahan mitral stenosis sebagai prediktor kematian pasien mitral stenosis

Metode: Penelitian dilakukan dari bulan Februari – Oktober 2019, penelitian dilaksanakan di RSUP Dr. Sardjito. Penelitian menggunakan sampel pasien mitral stenosis yang terdaftar di data registri mitral stenosis yang memenuhi kriteria inklusi dan eksklusi. Dari setiap subjek diambil data MVA menggunakan pengukuran planimetri, usia, jenis kelamin, kelas fungsional NYHA, atrial fibrilasi, hipertensi pulmonal, serta status kematian pasien. Hasil keparahan mitral stenosis diuji hubungannya dengan status kematian pasien menggunakan uji *Chi Square*. Kemudian variabel yang signifikan di uji menggunakan analisis regresi logistik.

Hasil: Sampel yang dipakai adalah sebanyak 161 orang, yang meliputi 114 (70,8%) perempuan dan 47 (29,2%) laki laki. Sampel memiliki rata rata usia 45 tahun. Sampel dengan kategori keparahan MS berdasrakan MVA planimetri berat sebanyak 115 (71,4%) orang dan ringan-sedang sebanyak 46 (28,6%) orang. 81,4 % sampel termasuk kelas fungsional NYHA I dan II sedangkan 18,6% termasuk kelas III dan IV. Sebanyak 37,3% tidak terdapat atrial fibrilasi sedangkan 62,7% terdapat AF. Hipertensi pulmonal muncul pada 80,1% sampel. Terdapat 1 variabel signifikan yaitu keparahan MS dengan nilai p=0,028. Variabel usia, jenis kelamin, NYHA, atrial fibrilasi, dan hipertensi pulmonal tidak signifikan dengan nilai p berturut-turut p=0,494, p=0,061, p=0,832, p=0,123, dan p=0,664.

Kesimpulan: Mitral stenosis berat adalah prediktor independen kematian pada pasien mitral stenosis. Dengan hasil signifikansi p=0,028 dan *Odds Ratio* (OR) sebesar 2,798 dengan rentang kepercayaan (CI) 95% 1,08 – 7,21.

Kata Kunci: keparahan mitral stenosis, *mitral valve area*, prediktor, kematian.

ABSTRACT

Background: Mitral stenosis defined as a decreasing in mitral valve opening that causing disturbance in left ventricle filling. Echocardiography have broadly used in the process determining diagnosis and prognosis of mitral valve disease. Echocardiography also have important role in determining the severity of mitral stenosis and its anatomycal involvement. As the severity increase which marked with decrease in mitral valve area, its causing an increase of left atrium and pulmonary vessel pressure. As the mitral valve area decreasing, its accompanied with increase of mitral stenosis complication such as atrial fibrilation and pulmonary edema which can lead to mortality.

Objective: To analyze the severity of mitral stenosis measured with planimetry as predictor of mortality outcome in mitral stenosis patient.

Method: The study was conducted from February to October 2019, the study was conducted in Dr. Sardjito hospital. The sample that used in the study is mitral stenosis patient that has been registered in mitral stenosis registry data that fulfill all inclusion and exclusion criteria. From every subject, data about MVA measured with planimetri, age, sex, NYHA class, atrial fibrilation, pulmonal hypertension, and patient outcome was collected. The result of MVA measurement then being tested using chi square method againts patient outcome.

Result: The sample used was 161 people, which included 114 (70.8%) women and 47 (29.2%) men. The sample has an average age of 45 years. Samples with MS severity based on planimetric MVA as severe category were 115 (71.4%) and mild-moderate as many as 46 (28.6%) people. As much as 81.4% of the sample included was belong to NYHA I and II functional classes while 18.6% belong to class III and IV. About 37.3% had no atrial fibrillation while 62.7% had AF. Pulmonary hypertension appeared in 80.1% of the sample. There is 1 significant variable, MS severity with a value of $p = 0.028$. Age, sex, NYHA, atrial fibrillation, and pulmonary hypertension variables were not significant with successive p values $p = 0.494$, $p = 0.061$, $p = 0.832$, $p = 0.123$, and $p = 0.664$.

Conclusion: Severe mitral stenosis is an independent predictor for mortality in mitral stenosis patient. With the significance of $p = 0.028$ and the Odds Ratio (OR) of 2.798 with confidence interval 95% is 1,08- 7,21.

Keyword: Mitral stenosis severity, mitral valve area, predictor, patient mortality