Perbandingan Persentase Kenaikan Flow dan Diameter Draining Vein pada Pasien Fistula Arteriovenosa (FAV) yang Dilakukan Dilatasi Balloon 1,5x Ukuran Normal Vena Pra Anastomosis terhadap Pasien FAV yang Tidak Dilakukan Balloon = Comparison of the Percentage Increase in Flow and Diameter of the Draining Vein in Patients with Arteriovenous Fistula (AVF) Who Underwent Balloon Dilatation 1,5x the Normal Size of the Pre-Anastomotic Vein to AVF Patients Who Did Not Undergo Balloon Dila

Indra Prasetya Yarman, author

Abstrak

Latar Belakang: Penyakit Ginjal Kronik (PGK) dan Penyakit Ginjal Tahap Akhir (PGTA) merupakan penyebab utama morbiditas dan mortalitas dengan 10% populasi dunia menderita PGK. Terapi pengganti ginjal yang paling sering dipilih adalah hemodialisis dengan pembuatan fistula arteriovenosa (FAV) yang maturasinya dinilai dari kriteria rule of 6s. Namun, FAV memiliki angka kegagalan maturasi yang relatif tinggi akibat feeding artery dan draining vein inadekuat. Teknik dilatasi seperti angioplasty balon (PBA) merupakan salah satu cara mengatasi kegagalan maturasi FAV. Perbandingan volume flow (VF) dan diameter draining vein pada pasien FAV perlu diketahui untuk mengevaluasi efek PBA terhadap maturasi FAV.
Tujuan: Menganalisis pengaruh PBA terhadap VF dan diameter draining vein pada pasien PGTA yang menjalani operasi FAV.
Metode: Desain penelitian adalah uji klinis kohort retrospektif, dilakukan di RSUPN Cipto Mangunkusumo, RSUPN Fatmawati, dan RSUD Kabupaten Tangerang. Penelitian dilaksanakan pada bulan Agustus 2019-Mei 2021. Hasil: Total sampel 88 pasien, dengan 58 pasien lost to follow-up, sehingga jumlah pasien yang disertakan dalam penelitian sebanyak 30 (15 pasien di grup kontrol, 15 pasien di grup intervensi). Berdasarkan pada data yang diperoleh, meskipun tidak bermakna secara statistik, terdapat perbedaan diameter dan volume flow draining vein antara grup kontrol dan intervensi, di mana pada grup intervensi, diameter dan volume flow draining vein lebih besar (p> 0,05). Jika dibandingkan per waktu antara kelompok kontrol dan intervensi, perbedaan rata-rata diameter dan volume flow draining vein yang signifikan hanya dijumpai saat pre operasi, post operasi, dan 6 minggu post operasi. Kekuatan analisis dengan besar sampel kontrol dan intervensi kurang dari 80%, sehingga hasil analisis ini hanya berlaku sebagai kesimpulan penelitian pendahuluan. Simpulan: Penggunaan teknik Primary Balloon Angioplasty (PBA) dapat meningkatkan aliran draining vein dalam pembuatan Fistula Arteriovenosa (FAV).
.....Background: Chronic kidney disease and end stage kidney disease is a cause of major morbidity and mortality in 10% of world population that suffer from CKD. The most frequently chosen renal replacement therapy is hemodialysis with the arteriovenous fistula (FAV). However, FAV has a relatively high number of maturation failures due to feeding artery and draining vein inadequacy. Mechanical dilatation such as angioplasty balloon (PBA) is one of the ways to overcome the failure of FAV maturation. Comparison of volume flow (VF) and diameter of draining veins in FAV patients needs to be known to evaluate the effect of PBA on FAV maturation.

Objective: Analyzing the effect of PBA on VF and draining vein diameter in end stage kidney disease patients undergoing FAV surgery. Method: The study design was a retrospective cohort clinical trial, conducted at RSUPN CiptoMangunkusumo, Fatmawati General Hospital, and RSU Tangerang. Research carried out in August 2019-May 2021.
Results: With total sample of 88 patients, 58 patients were lost to follow-up, so there are 30 patients were included in the study (15 patients in the control group, 15 patients in intervention group). Based on the data obtained, although not significant statistically, there are differences in diameter and volume flow draining vein between control and intervention group, in which in intervention group, diameter and volume flow of draining vein is larger than control ($p > 0.05$). When compared per time between the control and intervention groups, significant differences in the mean diameter and volume of flow draining veins were only found preoperatively, postoperatively, and 6 weeks postoperatively. The strength of the analysis with the control and intervention sample sizes is less than 80%, so the results of this analysis only apply as a preliminary research conclusion. Conclusion:The use of PBA technique can increase draining vein flow in FAV patients.