Ultrasonografi doppler pada ekstremitas bawah dalam kaitannya dengan amputasi pasien penyakit arteri perifer (PAP) = Doppler ultrasound of the lower extremities in corresponding to the amputation of peripheral arterial disease pad patients

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Abstrak

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Penyakit Arteri Perifer (PAP) merupakan sumbatan aliran darah arteri selain koroner dan intrakranial. PAP dihasilkan dari proses atherosklerosis, emboli, trombus, dan inflamasi yang mengarah ke stenosis arteri. PAP asimptomatik menempati 3-10% populasi dunia, dan meningkat hingga 15-20% pada 70 tahun ke atas. Divisi kami mencatat 18,1-24,7% pasien kaki diabetik dengan PAP mengalami amputasi pada kurun waktu 3 tahun terakhir. Evaluasi ultrasonografi Doppler pada arteri utama ekstremitas bawah diharapkan mampu mendeteksi secara dini apakah pasien akan diamputasi atau tidak baik mayor maupun minor.
Metode yang diambil adalah analitik komparatif kategorik independen dengan disain penelitian kohort retrospektif. Selama Januari 2010 hingga Desember 2011 didapatkan 24 pasien yang masuk kriteria inklusi. Arteri yang diperiksa a.femoralis, a.poplitea, a.tibialis posterior, dan a.dorsalis pedis dengan tampilan spektral mulai dari monofasik, bifasik, atau trifasik terutama dengan pelebaran spektral. Ultrasonografi salah satu modalitas ?operator dependent?, untuk mengurangi bias, peneliti menggunakan operator ultrasonografi adalah peneliti sendiri, trainee atau konsultan divisi kami.
Hasil didapatkan spektral bifasik hingga monofasik pada a.femoralis 25,0%, a.poplitea 58,3%, a.tibialis posterior 41,6%, a.dorsalis pedis 45,8%, angka amputasi mayor dan minor masing-masing 4%. Perhitungan statistik didapatkan untuk a.femoralis p=0,054 (95% CI), a.poplitea p=0,006 (95% CI), a.tibialis posterior p=0,010 (95% CI), dan a.dorsalis pedis p=0,021 (95% CI). Secara statistik, prediksi amputasi dapat bermakna pada ultrasonografi Doppler pada a.poplitea, a.tibialis posterior, dan a.dorsalis pedis.
Dapat ditarik kesimpulan pemeriksaan ultrasonografi Doppler penting dilakukan pada setiap pasien PAP untuk mengevaluasi secara khusus keadaan empat arteri utama ekstremitas bawah pasien dan untuk prediktor amputasi
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Peripheral Arterial Disease (PAD) is an occlusive disease of the blood flow artery beside coronary and intracranial artery. PAD is a result of atherosclerotic process, embolism, thrombus, and inflammation which toward of artery stenosis. Asymptomatic PAD counts 3-10% of worl population, and increasing until 15-20% in patient more than 70 years old. Our division counts 18.1-24.7% of diabetic foot patient with PAD undergoes amputation within this three years. Evaluation of duplex ultrasound in the main artery of lower extremity hopefully can detect whether patient will undergo limb salvage or limb loss, as early as possible, major or minor amputation.
METHODS
Research method is independent category comparative analytic with retrospective cohort design. Within January 2010 to December 2011, we collect 24 patients that rolled on inclusion criteria. We examined

femoral, poplitea, posterior tibial, and dorsalis pedis artery, which showed monophasic, biphasic, and triphasic spectrum of duplex imaging of the ultrasound, and all of them has broadening spectrum.Ultrasound is an operator dependent modality, to decrease the bias of this research, operator of the ultrasound is researcher, fellowship doctors and consultants of our division.
RESULTS
Results are 25% in femoral artery, 58.3% in popliteal artery, 41.6% in posterior tibial artery, and 45.8% in dorsalis pedis artery, which counts for biphasic and monophasic spectrum. Amputation rate is 4% for each minor and major amputation. Statistic analysis for correlation of arterial spectrum with amputation are, femoral artery p=0,054 (95% CI), popliteal artery p=0,006 (95% CI), posterior tibial artery p=0,010 (95% CI), and dorsalis pedis artery p=0,021 (95% CI).
CONCLUSION
Based on statistic analysis, amputation can be significant in duplex imaging of popliteal, posterior tibial, and dorsalis pedis artery. Conslusion regards duplex imaging to be performed in four main arteries of lower extremity, to predict limb loss.;BACKGROUND
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