Uji sensitivitas dan spesifisitas MRI serebral rutin dibandingkan 3D-CE-MRV dalam mendeteksi trombosis vena serebral penderita keganasan = Sensitivity and specificity test of routine cerebral MR compared with 3D-CE-MRV in detecting cerebral venous thrombosis in patients with malignancy

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Abstrak

Pendahuluan: Keganasan berhubungan erat dengan keadaan hiperkoagulasi dan berisiko empat kali lipat untuk terjadinya trombosis. Magnetic resonance imaging (MRI) dan magnetic resonance venography (MRV) merupakan metode diagnostik bersifat tidak invasif dan memiliki dengan sensitifitas dan spesifisitas serta akurasi yang tinggi untuk menilai vena serebral dan parenkim otak, three dimensional contrast enhanced (3D-CE) MRV merupakan metode yang mendekati baku emas untuk diagnosis trombosis vena serebral. TVS. Sampai saat ini belum ada penelitian di Indonesia yang membandingkan hasil pemeriksaan MRI serebral rutin dibandingkan dengan pemeriksaan 3D-CE-MRV dalam diagnosis trombosis vena serebra pada penderita keganasan.
Metode: Penelitian diagnostik dengan pendekatan potong lintang menggunakan studi prospektif untuk mengetahui tingkat sensitivitas dan spesifisitas MRI serebral rutin dibandingkan dengan 3D-CE-MRV dalam mendeteksi TVS penderita keganasan.
Hasil: MRI serebral rutin dalam menilai TVS pada penderita keganasan dibandingkan 3D-CE-MRV mempunyai nilai sensitivitas 90%, spesifisitas 50%, nilai duga positif 95% dan nilai duga negatif 75% serta nilai akurasi yang mencapai 95%, sehingga pemeriksaan MRI serebral rutin dapat dijadikan modalitas alternatif untuk diagnosis TVS. Lokasi trombosis yang tersering pada sinus sagitalis superior 63%, kemudian disusul oleh sinus transversus dan sinus rektus sebesar 31,7%, sinus kavernosus 27%, vena kortikal 25%, sinus sigmoid 12,7%, sinus sagitalis inferior 7,9%, sinus confluence 3,2% dan vein of Galen 1,6%. MRI serebral sekuens T1 kontras mempunyai sensitivitas mencapai 94,7% dan nilai spesifisitas 50%, terutama dalam evaluasi sistem vena superfisial, seperti sinus sagitalis superior dan vena kortikal dan terbatas pada sistem vena dalam.
Kesimpulan: MRI serebral rutin dapat dijadikan modalitas alternatif untuk diagnosis TVS.
.....Introduction: Malignancy closely associated with a hypercoagulable state and four-fold risk for thrombosis. Magnetic resonance imaging (MRI) and magnetic resonance venography (MRV) is a non-invasive diagnostic method and has the sensitivity and specificity as well as high accuracy for assessing cerebral venous and brain parenchyma, three-dimensional contrast enhanced (3D-CE) MRV is a method that approached the gold standard for the diagnosis of cerebral venous thrombosis (CVT). Until now there has been no research in Indonesia, which compared the results of routine cerebral MRI with 3D-CE-MRV in the diagnosis of cerebral venous thrombosis in patients with malignancy.
Methods: The study was cross-sectional diagnostic approach using a prospective study to determine the level of sensitivity and specificity of routine cerebral MRI compared with 3D-CE-MRV in detecting CVT patients with malignancy.
Results: Routine cerebral MRI with contrast in assessing CVT in patients with malignancy compared

examination 3D-CE-MRV has a sensitivity value of 90% , specificity value of 50%, positive predictive value of 95% and negative predictive value 75% and as well as the accuracy rate reaches 95%, so the routine examination of cerebral MRI with contrast can be used as an alternative modality for the diagnosis of CVT. Thrombosis location are common in the superior sagittal sinus 63%, followed by the transverse sinus and straight sinus of 31.7%, cavernous sinus 27%, cortical veins 25%, sigmoid sinus 12.7%, inferior sagittal sinus 7.9%, confluence sinus of 3.2% and 1.6% vein of Galen. Cerebral MRI sequences T1 contrast has reached 94.7% sensitivity and specificity values of 50%, especially in the evaluation of the superficial venous system, such as the superior sagittal sinus and cortical veins and limited the deep venous system. Conclusion: Routine cerebral MRI can be used as an alternative modality for the diagnosis of CVT.