Korelasi nilai MRI T2* dan T2* relaksometri serta SIR T2* hipofisis dengan kadar FSH dan LH pada pasien thalassemia mayor = Correlation between T2&T2* relaxometry and SIR T2 value of pituitary with degree of FISH and LH level and Fe status in thalassemia major patients

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Abstrak

Latar belakang dan tujuan: Thalassemia adalah penyakit anemia hemolitik yang diturunkan, merupakan penyakit genetik yang paling sering di dunia. Transfusi secara berkala pada pasien thalassemia dapat menyebabkan deposit besi pada berbagai organ seperti hipofisis. Deposit besi pada hipofisis dapat menyebabkan hipogonadotropik hipogonadisme. Biopsi merupakan pemeriksaan baku emas untuk menilai deposit besi pada organ, namun hal ini tidak dapat dilakukan pada hipofisis. Pemeriksaan MRI mulai digunakan unutuk mengukur kadar besi pada berbagai organ salah satunya hipofisis.
Metode: Uji korelasi dengan pendekatan potong lintang untuk mengetahui nilai korelasi nilai MRI T2 dan T2 relaksometri serta SIR T2 hipofisis dengan kadar FSH dan LH pada pasien thalassemia mayor. Pemeriksaan dilakukan 28 subjek penelitian dalam kurun waktu Desember 2016 hingga Maret 2016.
Hasil: Terdapat korelasi antara nilai relaksometri T2 hipofisis potongan koronal dengan kadar FSH dan LH, serta terdapat pula korelasi antara nilai SIR T2 hipofisis dengan kadar LH. Tidak terdapat korelasi antara nilai relaksometri T2 potongan koronal-sagital dengan kadar FSH dan LH, serta tidak terdapat pula korelasi antara SIR T2 hipofisis dengan kadar FSH.
Kesimpulan: Nilai relaksometri T2 hipofisis potongan koronal dan SIR T2 hipofisis dapat digunakan sebagai acuan deposit besi pada hipofisis serta dapat memonitor terapi kelasi pada pasien thalassemia - mayor.
.....Background and abjective Thalassemia is a hereditary hemolytic anemia disorder, it is one of the most common genetic disease in the world. Periodic transfusion for thalassemia patients may lead to iron deposit in various organs such as pituitary gland. Iron deposit in pituitary gland may induce hypogonadotropic hypogonadism. Biopsy and histopathology assessment is the gold standard examination to assess organ iron deposit, however this method is inapplicable for pituitary gland. MRI examination has been started to be used for measurement of iron level in various organ, such as pituitary gland.
Method: This study uses cross sectional method. MRI T2 and T2 relaxometry value as well as SIR T2 of pituitary gland was correlated with FSH and LH level in patients with major thalassemia. This study involves 28 subjects and conducted from December 2016 to March 2017.
Result: There is a correlation between relaxometry values of T2 pituitary gland on coronal slice with the level of FSH dan LH. There is also a correlation between pituitary SIR T2 value with the level of LH. There are no correlation between relaxometry values of T2 on coronal sagittal slices with the level of FSH and LH, furthermore there are no correlation between pituitary SIR T2 with FSH level.
Conclusion: Relaxometry value of pituitary T2 on coronal slice and pituitary SIR T2 value may be use as reference for iron deposit on pituitary gland as well as to monitor chelating therapy in major thalassemia patients.