Hubungan kadar aldehyde dehydrogenase-1A1 dengan pengecilan tumor setelah kemoradiasi tumor berdasarkan metode recist 1.1 pada kanker rektum stadium lanjut lokal = The correlation between aldh 1A1 level with tumor shrinkage after chemoradiation using recist 1.1 method in locally advance rectal cancer / Rhandyka Rafli

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Abstrak

[ABSTRAK

Pendahuluan : Kemoradiasi pada kanker rektum menghasilkan radical oxygen species (ROS) yang dapat memicu kematian sel. ALDH1A1 merupakan antioksidan yang mampu mengurangi ROS dan merupakan marker sel punca kanker. Penelitian ini bertujuan untuk mengetahui hubungan kadar ALDH1A1 dengan respon kemoradiasi berdasarkan metode RECIST 1.1 pada pasien kanker rektum stadium lanjut lokal.

Metode : Penelitian ini merupakan studi retrospektif terhadap 14 pasien kanker rektum stadium lanjut lokal yang memenuhi kriteria inklusi dari januari 2012 sampai januari 2015. ALDH1A1 diperiksa menggunakan metode ELISA dari sampel blok parafin kanker rektum. Respon pengecilan tumor dari CT scan dan MRI dihitung berdasarkan metode RECIST 1.1.

Hasil : Didapatkan rerata kadar ALDH1A1 sebesar $9{,}014 \pm 3{,}3$ pg/mL, rerata persentase respon radiasi $7{,}89 \pm 35{,}7$ % dan diklasifikasikan berdasarkan RECIST didapatkan proporsi respon parsial sebesar 28,6 % , respon stabil sebesar 50% dan respon progresif sebesar 21,4%. Terdapat korelasi negatif kuat yang bermakna ($r = -0{,}890$ dan $p < 0{,}001$) antara kadar ALDH1A1 dengan respon kemoradiasi berdasarkan RECIST.

Kesimpulan : pada penderita kanker rektum stadium lanjut lokal respon kemoradiasi dipengaruhi oleh kadar ALDH1A1 dalam jaringan tumor. Semakin tinggi kadar ALDH1A1 semakin buruk respon kemoradiasi.

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ABSTRACT

Introduction : Chemoradiation in rectal cancer produce radical oxygen species (ROS) wich can cause cell death. ALDH1A1 is an antioxidant that can reduce ROS and known as cancer stem cell marker. The purpose of this study is to determine the correlation between ALDH1A1 level with tumor shrinkage using RECIST methode in locally advance rectal cancer.

Methode : This is a retrospective study to 14 locally advance rectal cancer patients who meet the inclusion criteria from january 2012 to january 2015. ALDH1A1 level was measured by ELISA from paraffin embeded tissue. Tumor shrinkage was measured from CTscan or MRI using RECIST 1.1 methode.

Result : The mean ALDH1A1 level is 9,014 ± 3,3 pg/mL, the mean of tumor shrinkage is 7,89 ± 35,7 %, Partial respond proportion is 28,6 % , Stable dissease proportion is 50% and progressive dissease proportion is 21,4%. There was a significant strong negative correlation (r = -0,890, p < 0,001) between ALDH1A1 with tumor shrinkage.

Conclusion : This study showed that tumor shrinkage in locally advanced rectal cancer after chemoradiation is influenced by ALDH1A1 level. The increase od ALDH1A1 level will decrease tumor shrinkage after chemoradiation;Introduction : Chemoradiation in rectal cancer produce radical oxygen species (ROS) wich can cause cell death. ALDH1A1 is an antioxidant that can reduce ROS and known as cancer stem cell marker. The purpose of this study is to determine the correlation between ALDH1A1 level with tumor shrinkage using RECIST methode in locally advance rectal cancer.

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