

PERBANDINGAN KUANTITAS WASHOUT ANTARA FASE DELAYED
DAN FASE VENA CT SCAN ABDOMEN MULTIFASE PADA
KARSINOMA HEPATOSELULER

Arif Budiman¹, Yana Supriatna², Sudarmanta²

¹Program Studi Ilmu Kedokteran Klinis dan ²Departemen Radiologi
Fakultas Kedokteran, Kesehatan Masyarakat dan Keperawatan
Universitas Gadjah Mada
Yogyakarta-Indonesia

INTISARI

Latar Belakang : Kuantitas tumor *washout* fase vena atau *delayed* merupakan salah satu indikator kuat dalam menentukan diagnosis karsinoma hepatoseluler yang tipikal selain lesi hipervaskular pada fase arteri. Pemeriksaan tumor *washout* sejauh ini hanya dinilai secara subyektif kualitatif, penilaian yang bersifat obyektif dengan menghitung kuantitas *washout* jarang dilakukan, sehingga menentukan fase CT Scan Abdomen terbaik untuk menilai *washout* sangat berarti untuk meningkatkan akurasi diagnosis.

Tujuan : Membandingkan kuantitas *washout* antara fase *delayed* dan fase vena CT Scan Abdomen Multifase pada pasien karsinoma hepatoseluler.

Metode: Penelitian ini termasuk jenis analitik observasional retrospektif dengan rancangan *cross sectional*, menggunakan data sekunder pasien yang menjalani CT Scan Abdomen Multifase di RSUP dr Sardjito. Pasien yang memenuhi kriteria inklusi dan eksklusi yang dijadikan subyek penelitian sebanyak 51 orang. Diukur densitas lesi hepar dan parenkim hepar pada fase prekontras, arteri, vena dan *delayed* yang selanjutnya diformulasikan dengan rumus tertentu untuk menghasilkan nilai kuantitas *washout*. Data kemudian dianalisis dengan uji t berpasangan.

Hasil : Analisis statistik menunjukkan terdapat perbedaan kuantitas *washout* antara fase *delayed* dan fase vena pada perhitungan menggunakan rumus *washout* absolut dan relatif ($p < 0,05$), sedangkan dengan rumus VPAR/DPAR tidak terdapat perbedaan ($p > 0,05$). Angka rerata \pm SD fase vena dibandingkan dengan fase *delayed*, $WO_{Abs} 19,3\pm 16,9$ berbanding $38,1\pm 25,4$, $WO_{Rel} 7,0\pm 6,8$ berbanding $13,4\pm 8,2$ VPAR/DPAR $142,2\pm 36,7$ berbanding $143,6\pm 36,0$.

Kesimpulan : Terdapat perbedaan kuantitas *washout* lesi KHS pada fase vena dan fase *delayed*, Nilai rerata lebih tinggi didapatkan pada fase *delayed* dibandingkan dengan fase vena bila menggunakan rumus perhitungan *washout* absolut dan *washout* relatif.

Kata Kunci : Karsinoma hepatoseluler, kuantitatif *washout*, vena, *delayed*

COMPARISON OF WASHOUT QUANTITY BETWEEN *DELAYED* PHASE AND VENOUS PHASE OF MULTIPHASE ABDOMINAL CT SCAN IN HEPATOCELLULAR CARCINOMA

Arif Budiman¹, Yana Supriatna², Sudarmanta²

¹ Clinical Medicine Study Program and ²Department of Radiology
Faculty of Medicine, Public Health and Nursing
Gadjah Mada University, Yogyakarta-Indonesia

ABSTRACT

Background : The quantity of tumor washout in the venous or delayed phase is one of the strong indicators in determining the diagnosis of typical hepatocellular carcinoma, in addition to the hypervascular lesion in the arterial phase. Tumor washout assessment has so far only been evaluated qualitatively in a subjective manner, with objective assessment by calculating the washout quantity rarely being done, so determining the best abdominal CT scan phase to assess washout is very significant to improve the accuracy of the diagnosis.

Objective : To compare the quantity of washout in the delayed phase versus the venous phase of multiphase abdominal CT scans in patients with hepatocellular carcinoma.

Method : This research is a retrospective observational analytic study with a cross-sectional design, using secondary data of patients who underwent multiphase abdominal CT scans at dr. Sardjito Hospital. Patients who met the inclusion and exclusion criteria and were included as research subjects were 51 people. The density of the hepatic lesions and hepatic parenchyma in the pre-contrast, arterial, venous, and delayed phases were measured, and then formulated with a certain formula to generate the washout quantity values. The data was then analyzed using a paired t-test.

Results : Statistical analysis showed that there was a difference in the quantity of washout in the delayed phase compared to the venous phase when calculated using the absolute and relative washout formulas ($p < 0.05$), while with the VPAR/DPAR formula there was no significant difference ($p > 0.05$). The mean \pm SD values for the venous phase compared to the delayed phase were, WO_{Abs} 19.3 \pm 16.9 versus 38.1 \pm 25.4, WO_{Rel} 7.0 \pm 6.8 versus 13.4 \pm 8.2, VPAR/DPAR 142.2 \pm 36.7 versus 143.6 \pm 36.0.

Conclusion : There was a difference in the quantity of washout of HCC lesions in the venous phase and delayed phase. The mean values were higher in the delayed phase compared to the venous phase when using the formulas for absolute washout and relative washout.

Keywords : Hepatocellular carcinoma, quantitative washout, venous, delayed