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## The Cardiovascular Risk Factor Profiles among End-stage Renal Failure Patients Treated with Continuous Ambulatory Peritoneal Dialysis and Intermittent Hemodialysis

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### Abstract

Cardiovascular (CV) event is the most common cause of death in dialysis patients. Both traditional and nontraditional CV risk factors related to malnutrition, inflammation, and anemia are commonly found in this population. This study was conducted to evaluate the burden factors of CV risk factors and its management in our regularly dialyzed patients. It was a single-center, cross-sectional analysis of prevalent intermittent hemodialysis (IHD) and continuous ambulatory peritoneal dialysis (CAPD) patients followed up in our hospital. Both the traditional and non-traditional CV risk factors were recorded and compared between the two groups. Eighty-eight patients were recruited. Forty-five were treated with CAPD and 43 patients were treated with IHD. The mean age was 49.5 +/- 15.17 years old and 54.5% were females. Eighty percent were Malay followed by Chinese (14.7%) and Indian (5.7%). Thirty-eight percent were hypertensive and 17% were diabetic. The mean age of CAPD patients was 48.9 +/- 16.9 compared to 50 +/- 13.5 years old for IHD patients ( $P > 0.05$ ). The body mass index (BMI) of CAPD patients was 23.9 kg/m<sup>2</sup> versus 21.7 kg/m<sup>2</sup> of the IHD ( $P = 0.04$ ). The systolic and diastolic blood pressure of CAPD patients were 158 and 89 mm Hg in comparison to 141 and 72 mm Hg in IHD patients ( $P < 0.001$ ) and their total and low-density lipoprotein cholesterol level were 5.93 mmol/L and 3.84 mmol/L versus 4.79 mmol/L and 2.52 mmol/L, respectively ( $P \leq 0.001$ ). The CAPD patients were hyperglycemic more than IHD patients, although it was not statistically significant. All the nontraditional CV risk factors except serum albumin were comparable between the two groups. Serum albumin in CAPD patients was 35.5 g/L compared to 40.8 g/L in the IHD patients ( $P < 0.001$ ). In our prevalent dialysis-dependent patients, both traditional and non-traditional CV risk factors are common. Due to the prolonged and continuous glucose exposure from the peritoneal dialysis fluid, the CAPD patients had highly atherogenic serum, higher BMI, and intensified inflammation which pre-disposed them to higher CV events.

### Keywords

**KeyWords Plus:** DISEASE; ASSOCIATION; INFLAMMATION; PROTEIN; CAPD

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