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신장내과 조기 의뢰가 투석 환자에서 의료비용에 미치는 영향: 말기 신부전 임상연구센터 및 건강보험 심사 데이터를 이용한 다기관 전향적 코호트 연구

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Early Nephrology Referral Reduces Economic Costs During the Period before and after Initiation of Renal Replacement Therapy: Study of the Clinical Research Center for End Stage Renal Disease in Korea

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Background: Patients with chronic kidney disease (CKD) who start renal replacement therapy soon after seeing a nephrologist (late referral) have increased morbidity and mortality. We evaluated the health care costs according to referral time of patients with CKD to a nephrology clinic.

Methods: A total of 941 patients who were newly diagnosed as end-stage renal disease and start dialysis from August 2008 to August 2011 were prospectively enrolled. Early referral group was defined as patients who were referred to a nephrologist more than a year before dialysis and visited nephrology 2 or more times, and other patients whose referral time was less than a year were considered as late referral group. Information about the medical costs during 1 year just before and after initiation of dialysis was acquired from the claim data of Korea Health Insurance Review and Assessment Service.

Results: Time from referral to dialysis was significantly longer in 547 early referral patients than late referral patients (63.9±62.1 versus 2.7±3.4 months, $p<0.001$). At the time of dialysis start, most clinical characteristics including age, sex, body mass index, co-morbidity index, estimated GFR, hemoglobin level, calcium level, cholesterol level were similar in both groups, except for diastolic blood pressure (77.5±13.4 versus 79.5±14.8 mmHg, $p=0.041$). Total amount of medical costs during the first 12 months after initiation of dialysis was not different between the two groups. However, costs during the first 1 month of early referral patients were significantly lower than those of late referral patients (3.3±2.4 versus 3.7±3.1 million won, $p=0.025$). Total 12 months health care costs before initiation of dialysis were significantly lower in the early referral group (6.8±6.4 versus 9.5±8.6 million won, $p<0.001$).

Conclusion: Early referral of CKD patients to a nephrologist is associated with decreased medical costs during the predialysis and early period of dialysis.

Key Words: 만성콩팥병, 조기의뢰, 의료비용
Chronic kidney disease, Early referral, Health care costs