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# 대장내시경 전처치를 위한 polyethylene glycol 복용 후 발생한 비가역적인 신부전

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고은실, 정성진, 신석준, 김형욱, 박철휘, 양철우, 김용수, 장윤식

# Irreversible Renal Failure with Nephrotic Syndrome after Bowel Cleansing with Polyethylene Glycol

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**Introduction:** Bowel preparation with polyethylene glycol or sodium phosphate before colonoscopy has provided cleansing with high-quality, good cost-effectiveness and acceptable tolerance. Recently, concerns about the safety of bowel preparation with sodium phosphate in association with acute renal failure have been raised, while polyethylene glycol is considered to be a relatively safe agent. We describe here renal pathological findings in a patient with irreversible renal failure with nephrotic syndrome after polyethylene glycol use.

**Case:** A previous healthy 66-year-old woman was referred to our hospital with generalized edema and weight gain 1 weeks after colonoscopic procedure at a local hospital. Bowel cleansing with polyethylene glycol was performed before the procedure. 1 week before colonoscopy, a routine medical evaluation showed serum creatinine of 0.8 mg/dL. Laboratory results on admission revealed elevated serum creatinine of 2.32 mg/dL and 24 hr urine protein 7.8 g/day. All viral markers and serologies were negative or normal. A renal biopsy was performed to ascertain the etiology of nephrotic syndrome with renal failure. Light microscopic examination showed mesangial proliferation and matrix expansion in glomeruli. The interstitium was mildly infiltrated by mononuclear cells with a moderate degree of fibrosis. The renal tubule showed atrophic change and marked necrosis. The immunofluorescent studies were negative for immunoglobulins and complements. Electron microscopy showed partial foot process effacement. These findings were compatible with a diagnosis of minimal change disease with acute tubular necrosis. Unfortunately, renal impairment did not improve and the patient had to depend on conventional hemodialysis.

**Conclusion:** In general, polyethylene glycol has been reported not to be associated with an increased risk of renal damage. However, this rare case highlights the possibility that polyethylene glycol can also cause an irreversible kidney injury.

**Key Words:** 대장내시경, 급성신부전, 신증후군
Polyethylene glycol, Colonoscopy, Acute renal failure