P90

클로렐라 섭취 후 발생한 급성 세뇨관간질성 신염 1예

고려대학교 의과대학 소아과[1], 해부병리과[2]

임형은[1] · 유기환[1] · 서원희[1] · 원남희[2] · 홍영숙[1] · 이주원[1]

Acute Tubulointerstitial Nephritis Following ingestion of Chlorella Tablets

Hyung Eun Yim[1], Kee Hwan Yoo[1], Won Hee Seo[1], Nam Hee Won[2], Young Sook Hong[1], Joo Won Lee[1]

Department of Pediatrics College of Medicine[1] Korea University, Department of Pathology[2]

Introduction : Chlorellae are freshwater unicellular, microscopic algae, widely used as a food supplement in Japan. While several studies of detecting anti-inflammatory and immunomodulatory activities of chlorella extracts have been documented, no case of chlorella-induced nephritis has apparently been reported. Here we report a boy with acute tubulointerstitial nephritis (ATIN), who developed it following ingestion of chlorella tablets as food supplement.

Case : An 11-year old boy was incidentally detected to have glucosuria, proteinuria, and leukocyturia in school mass screening. He had a history of ingestion of chlorella tablets for 3 months (chlorella 200 mg×10 tablets/day). Laboratory studies showed anemia, increased creatinine, decreased GFR, hypokalemia, hypouricemia, hypophosphatemia, hypergammaglobulinemia, proteinuria, leukocyturia, and glucosuria. Renal biopsy revealed features of ATIN with diffuse interstitial infiltrates of lymphocytes, plasma cells, and some eosinophils, which were occasionally invaded within the tubular cells. Some tubular atrophy and interstitial fibrosis were also observed, but not characteristic. There were no specific findings on electron microscopic and immunofluorescent examinations. The patient improved renal function after initiation of corticosteroid therapy and chlorella discontinuation for 6 months. After 6 months from cessation of steroid, skin test with aqueous extracts of the chlorella (100 mg and 200 mg in 5 mL of distilled water) showed positive wheal reaction (5.6×7.1 mm diameter wheal; control histamine 5.0×7.02 mm).

Conclusion : This case implies that chlorella may be of clinical significance in certain groups of patients and a causative allergen inducing tubulointerstitial injury in kidney.