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Acute Kidney Injury

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Acute interstitial nephritis induced by *Solanum nigrum*

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Background: Acute interstitial nephritis (AIN) is an important cause of reversible acute kidney injury, which is pathologically characterized by an inflammatory infiltrate in the renal interstitium. *Solanum nigrum* (*S. nigrum*) is a medicinal plant member of the Solanaceae family of plants. However, there was no report of AIN caused by *S. nigrum*. Here, we report the first case of biopsy-proven AIN following ingestion of *S. nigrum*, which was successfully treated by corticosteroid therapy.

Methods: Symptoms and signs of AIN may be non-specific and are often absent unless symptoms and signs of renal failure develop. Although it is also difficult to diagnose AIN associated with the use of *S. nigrum* in presenting case, the diagnosis can be strongly suspected on the basis of the temporal relationship between kidney injury and ingestion of *S. nigrum*. In addition, the clinical and laboratory features such as fever, eosinophilia and the renal biopsy finding may provide a clue in the diagnosis of AIN due to *S. nigrum*.

Results: The mainstay of therapy for drug-induced AIN is discontinuation of the causative agent. The benefit of corticosteroids in the treatment of AIN remains elusive, and there is no guideline for exact dose and duration of corticosteroid use in the patients with drug-induced AIN. In our case, we administered oral steroids, since the renal function of the patient did not recover despite of supportive care. The response of steroid therapy was dramatic. The patient's serum creatinine and proteinuria improved within 7 days after starting steroid treatment. Therefore, we think that steroid therapy could be helpful to treat the AIN due to *S. nigrum*.

Conclusion: We believe that the patient might improve more quickly, if we had performed kidney biopsy earlier. Thus, we think that prompt kidney biopsy and steroid therapy should be considered in case of suspecting the AIN due to *S. nigrum*.

Keywords: acute interstitial nephritis, corticosteroid, Solanum