



Use of anti-parasitic drugs in patients with renal failure

Beuy Joob^{1*}, Viroj Wiwanitkit²

Introduction

Renal problem is seen worldwide. There are many renal failure cases in several countries around the world. The management of the case is usually an important public health concern. An interesting issue on the management of renal failure patient is the case with additional concurrent medical disorder. In tropical countries where the intestinal helminthiasis is common, the management of the renal failure patient who has the concurrent intestinal parasite infection becomes an interesting issue in clinical nephrology. The great concern is on the efficacy and safety of anti-parasitic drug administration in cases with underlying renal failure. In this short article, the authors summarize and discuss on this interesting issue.

Anti-parasitic drug treatment in patients with underlying renal failure

1. Roundworm infection

Roundworm infection can be seen in several areas of the worm. The examples of important roundworm are hookworm and *Ascaris* spp. The roundworm infection is observable in patients with underlying renal failure. Regarding hookworm, it is reported as a possible hidden cause of anemia in hemodialysis patients. Wu et al reported the management of hookworm infection in the patient undergoing hemodialysis and showed that standard treatment was applicable (1).

Regarding ascariasis, there are some reports on cases with concurrent ascariasis and renal failure problem. In those cases, the standard management of ascariasis can also provide good treatment outcome (2, 3).

2. Tapeworm infection

Regarding the important tapeworm infection, cysticercosis, the standard anti-parasitic treatment is proven effective and safe in patients with underlying renal failure (4).

3. Fluke infection

The use of standard anti-parasitic drug against fluke,

Implication for health policy/practice/research/medical education

Renal failure is an important clinical problem in medicine. There are many patients with renal failure around the world. In patients with renal failure, other concurrent medical problems are possible. In tropical countries, where the intestinal parasitic infection is common, the concurrence between renal failure and intestinal parasite infection is observable.

Keywords: Renal failure, Parasite, Drug treatment, Chronic renal failure

praziquantel is proven safe and effective in cases with underlying renal failure. Pehrson et al reported the clinical observation on using praziquantel for treating a patient with schistosomiasis and chronic renal failure that the standard dosage was acceptable (5). Regarding paragonimiasis, Liu et al reported the success in the treatment of a patient with chronic renal failure while this parasite infection treated with a standard dosage of praziquantel (6). However, there is a report that praziquantel is a cause of renal injury in general people (7).

Conclusion

There is a chance that, the patient with renal failure get intestinal parasite infection. According to the evidence in the published data, the anti-parasitic drug treatment is considered effective and safe for the patients with underlying renal failure.

Authors' contribution

BJ and VW wrote the manuscript equally.

Conflicts of interest

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Ethical considerations

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¹Sanitation 1 Medical Academic Center, Bangkok, Thailand. ²Honorary professor, Dr DY Patil University, Pune, India.

*Corresponding Author: Beuy Joob, Email: beuyjoob@hotmail.com

References

Wu F, Xu Y, Xia M, Ying G, Shou Z. Hookworm Anemia in a Peritoneal Dialysis Patient in China. *Korean J Parasitol.* 2016; 54:315-7.

Meister P, Segeer W, Segeer S, Auer K. Interstitial nephritis with acute renal failure in *Ascaris lumbricoides* infection. *Pathologie.* 1995; 16:434-8.

Morović-Vergles J, Sabljarić-Matovinović M, Šćrbec B, Prskalo M, Naumovski-Mihalić S, Prkacin I, et al. Acute pancreatitis caused by *Ascaris lumbricoides* in acute renal failure: case report. *Lijec Vjesn.* 1995; 117:87-8.

Garcia HH, Del Brutto OH; Cysticercosis Working Group in Peru.

Antiparasitic treatment of neurocysticercosis - The effect of cyst destruction in seizure evolution. *Epilepsy Behav.* 2017; 76:158-162.

Pehrson PO, Bengtsson E, Diekmann HW, Groll E. Treatment with praziquantel in a patient with schistosomiasis and chronic renal failure. *Trans R Soc Trop Med Hyg.* 1983; 77:687-8.

Liu CT, Chen YC, Chen TH, Barghouth U, Fan CK. Intestinal paragonimiasis with colonic ulcer and hematochezia in an elderly Taiwanese woman. *Korean J Parasitol.* 2012; 50:349-52.

Chai ZW, Xu QC. One case of acute kidney injury caused by praziquantel. *Zhongguo Xue Xi Chong Bing Fang Zhi Za Zhi.* 2011; 23:228.

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