61

Urological Surgical Sequelae Impact the Renal Functions-3 Critical Cases Analysis

Kuan-Chou Chen*, Yung-Ho Hsu, Chiung-Chi Peng*****

**Department of Urology, **Department of Nephrology, Shuang Ho Hospital, Taipei Medical University,*
****Graduate Institute of Clinical Medicine, College of Medicine, Taipei Medical University*

Close

Abstract

Post-operative sequelae of endoscopic bladder or prostate surgeries will cause uncommon acute renal failure situations that might relate to peri-operative sepsis or TUR syndrome. We report 3 critical cases, analyse the clinical data vicissitudes and share managing strategies.

Objectives

Case 1: A 77 years old male patient had suffered from profound septicemia and septic shock post TUR-P due to acute infectious sources reflux into the venous plexus during the operation. The critical condition caused multiple organs failure including acute renal failure, the count of blood cells changes and serum biochemical parameters vicissitudes were listed in table 1.

Case 2: A 85 years old female patient had suffered from bladder perforation when transurethral resection of bladder tumor, and this leaded to hypo-osmolarity hemodynamic change due to distilled water intraperitoneal influx and absorption and then acute renal failure followed by hemolysis.

Case 3: A 78 years old male patient had suffered from bladder perforation during performing the transurethral resection of bladder cuff before nephroureterectomy, it caused hypo-osmolarity hemodynamic change due to distilled water intraperitoneal influx and absorptionand then acute renal failure followed by hemolysis.

Methods

Case 1, case 2 and case 3 accepted 4, 2 and 1 episodes of hemodialysis respectively to successfully rescue the renal function (Figure 1).

***** Corresponding author: Dr. Chiung Chi Peng**
Graduate Institute of Clinical Medicine, Taipei Medical University

Results

	1	2(OP)	3	4	5	6	7	8	9	10
Serum Biochemical Parameters										
BUN(mg/dL)	17.2		38.1	60	84	58	45	72		81
Creatinine(mg/dL)	0.94		3.64	4.95	6.03	4.38	3.46	4.93		5.06
Sodium(mmol/L)	138		132	136	140	138	136	135		136
Potassium(mmol/L)	3.7		4.6	4.9	4.8	3.8	3.5	4.3		4.0
Calcium						7.5		8.0		
Phosphate										
Albumin (g/dL)				2.1						2.8
GOT (U/L)	43			935	576		290			68
GPT (U/L)	43			258	162		73			11
Bilirubin D/T				2.9/4.5			6.2	3.7		2.4
LDH (U/L)				1205						437
Cell count										
WBC (10^3/μL)	4.9		17.3	19.1	13.6		10.5			14.4
RBC (10^6/μL)	3.84		3.9	3.34	2.76		2.92			3.5
Platelet (10^5/μL)	255		100	56	59		50			116
Hemoglobin(g/dL)	12.1		12.3	10.7	7.6		9.2			11.0
PT (sec)				17.0			11.3			
APTT (sec)				59.0			25.1			
INR				1.66			1.08			
Fibrinogen(mg/dL)				97						
D-dimmer(mg/dL)				>35.2			6.16			
Daily urine output (mL)			2730	380	500	260	350	290	840	1920

	11	12	13	14	15	16	17	18	19	20
Serum Biochemical Parameters										
BUN(mg/dL)		86.1		100		98	86.3			26.0
Creatinine(mg/dL)		4.82		4.53		3.52	2.73			1.2
Sodium(mmol/L)		133		137		144	145			142
Potassium(mmol/L)		3.4		3.3		4.4	4.1			3.1
Calcium		7.2					6.9			6.9
Phosphate										
Albumin (g/dL)		2.7					2.2			
GOT (U/L)		36		27						46
GPT (U/L)		6		5						23
Bilirubin D/T										3.4
LDH (U/L)		368								
Cell count										
WBC (10^3/μL)		11.1		13			9.10			
RBC (10^6/μL)		3.36		3.35			1.73			
Platelet (10^5/μL)		147			265		209			
Hemoglobin(g/dL)		10.6		10.5	8.9		7.5	9.7	11.0	11.8
PT (sec)					11.0		11.3			
APTT (sec)					22.0		24.4			
INR					1.05		1.08			
Daily urine output (mL)	2630	2950	3520	3080	2080	2560	4460	5500	6190	3430

Table 1

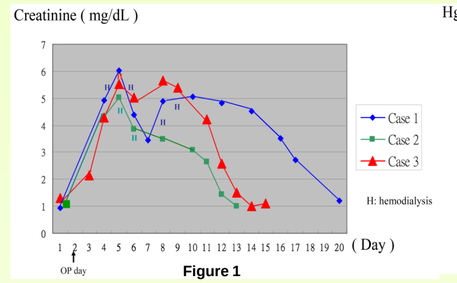

Figure 1

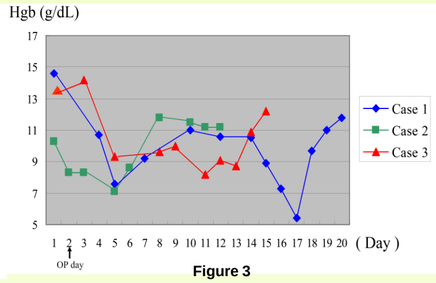

Figure 3

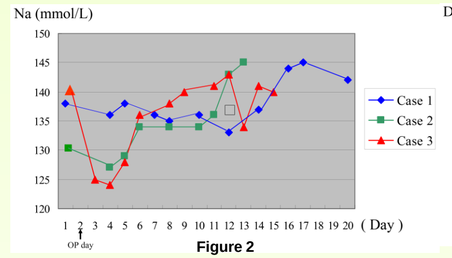

Figure 2

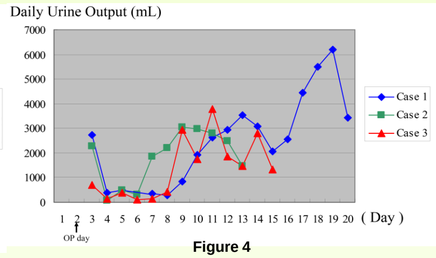

Figure 4

Conclusions

1. It takes 20 days for the sepsis-induced acute renal injury to restore when undergoes mandatory hemodialysis, while the hypo-osmolarity-induced acute renal injury takes 14 days. The sepsis-induced kidney injury needs more recovery time than the hypo-osmolarity-induced kidney injury do (Figure 1).
2. It needs more hemodialysis episodes (4 times) for the sepsis-induced acute renal injury to restore than the hypo-osmolarity-induced acute renal injury do (1-2 times) (Figure 1).
3. The mandatory hemodialysis initiates on the 4th post operative day both in sepsis-induced or hypo-osmolarity-induced acute renal injury (Figure 1).
4. The serum sodium restores on the 5th post operative day in the hypo-osmolarity-induced acute renal injury when undergoes mandatory hemodialysis (Figure 2).
5. The daily urine output restores on the 9th post operative day both in sepsis-induced or hypo-osmolarity-induced acute renal injury when undergoes mandatory hemodialysis (Figure 4).
6. The recovery order of organs from profound sepsis is liver, bone marrow, cardiopulmonary system, kidney, bowel and neural system after feasible and successful treatment (Table 1).