



가 . 20

45%, 70%
75% 가 50% (anuric), (oliguric)

1). 가 (nonoliguric)

가

1. : 24 100cc
2. : 24 100 - 400cc
3. : 24 400cc

1.

0.5 mg/dL 50% 가

50%

가 가

20 가 2). 가

가

1%, 30%

20% 2). 가

1)

(prerenal),

(renal) (postrenal)

1. : , , , (RBC cast), (WBC cast), (muddy brown granular cast), , , , , ,

Table 1. Laboratory evaluation of acute renal failure

| Test | Prerenal | Intrinsic renal | Postrenal |
|------------------------|-------------------------|--|-----------------------------------|
| BUN/Cr ratio | >20 | 10-20 | 10-20 |
| Urine specific gravity | >1.020 | 1.010 | >1.010 early, <1.010 late |
| Uosm (mOsm/kg) | >350 | 300 | >400 early, 300 late |
| UNa (mEq/L) | <20 | >30 | <20 early, >40 late |
| FeNa (%) | <1* | >2-3 | <1 early, >3 late |
| UCr/PCr ratio | 40 | 20 | >40 early, 20 late |
| Urine microscopy | Normal hyaline casts | ATN: dark granular casts, hyaline casts, renal epithelial cells/casts GN: RBCs, dysmorphic RBC (>20%), RBC casts, WBC/WBC casts, proteinuria AIN: urine eosinophilia, WBC, WBC casts, hyaline casts | Normal hyaline, granular casts |

* Falsely low FeNa seen occasionally with acute GN, radiocontrast-induced nephropathy, rhabdomyolysis.

(eosinophiluria)

2) (urinary indices) (1)

가

3)

가

3.

가

가

가

(echo)

(Duplex Doppler Ultrasound)

가

1.

4.

가

1.4 g/kg

100 gm , 0.6
3035 kcal/kg

가

Meperidine imipenem
 digoxin nitroprusside
 5) Growth factor
 Insulin-like growth factor-1 (IGF-1), Hepatocyte growth factor (HGF), Transforming growth factor (TGF)
 가

2.
 1) Furosemide
 furosemide
 thick ascending limb
 6) Calcium channel blocker

(ototoxicity)
 3)
 7) Acetylcysteine
 Tepel 가

2) dopamine
 Dopamine 가
 가
 dopamine
 가
 8) Thyroxine
 (1-3ug/kg/min)
 가 7)

3) Atrial Natriuretic Peptide (ANP)
 ANP 가
 가
 가
 4)
 8)
 9) PGE1
 PGE1 가 endothelin
 (transcription) 가
 endothelin
 가
 가 9)
 5)

3. (Renal replacement therapy: RRT)

4) Mannitol
 Mannitol 가 (crushing ,
 injury) myoglobinuria ,
 가
 3)

가

12)

가

가

10)

13)

(refractory fluid overload),

SCUF (Slow Continuous Ultrafiltration), CAVH (Continuous Arteriovenous Hemofiltration), CVVH (Continuous Venovenous Hemofiltration), CAVHD (Continuous Arteriovenous Hemodialysis), CVVHD (Continuous Venovenous Hemodialysis), CVVHDF (Continuous Venovenous Hemodiafiltration)

80- 100 mg/dL
1.0 가

BUN
daily Kt/V 0.9

1)

4) SLED (Sustained Low Efficiency Dialysis), EDD (Extended Daily Dialysis) SCD (Slow Continuous Dialysis)

가

CRRT 가 가

1998

100 mL/min 200 mL/min

2)

8

24

14)

가

가

2)

가 가

가

11)

가

3) (Continuous renal replacement therapy: CRRT)

가

(ventricular filling pressure), (BUN, potassium, bicarbonate)

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