



ขนาดการใช้ยาตามการทำงานของไต

Dose adjustment in renal impairment

รายชื่อยาที่ต้องปรับขนาดการใช้ยาตามการทำงานของไต

CrCl (ml/min)	ยาที่ต้องทำการปรับขนาดยา
< 60	Amikacin, Gentamicin, Streptomycin, Kanamycin, Tobramycin (Once-daily aminoglycosides), Clarithromycin (ใช้ร่วมกับ Ritonavir), Didanosine
< 54	Cefazolin
< 50	Acyclovir IV, Allopurinol, Ampicillin, Azathioprine, Cefepime, Cefotaxime, Ceftazidime, Desmopressin, Doripenem, Ertapenem, Ethambutol, Fluconazole, Fosfomycin, Imipenem, Lamivudine, Levofloxacin, Meropenem, Penicillin G, Quinine, Ranitidine, Rifampicin, Stavudine, Tenofovir, Vancomycin
< 40	Colistin
< 30	Amoxicillin/Clavulanate, Ampicillin/Sulbactam, Bactrim, Ciprofloxacin, Clarithromycin, Enoxaparin, Fondaparinux, Oseltamivir
< 25	Acyclovir PO
< 20	Diclofenac, Enalapril, Ibuprofen, Piperacillin
< 15	Zidovudine
< 10	Pyrazinamide

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Once-daily Aminoglycosides

Drug	Creatinine Clearance (mL/min)						
	> 80	60 – 80	40 – 60	30 – 40	20 – 30	10 – 20	< 10
	Dose q 24 hr (mg/kg)				Dose q 48 hr (mg/kg)		Dose q 72 hr
Gentamicin/ Tobramycin ¹	5.1	4	3.5	2.5	4	3	2
Amikacin/ Streptomycin ¹	15	12	7.5	4	7.5	4	3

Antimicrobials

Drug	Normal Half life (hr)	Normal dose	Method	Adjustment for renal failure Estimated CrCl (mL/min)		
				31 – 50	10 - 30	< 10
Acyclovir PO ⁴	2 – 4	I) 200 mg q 4 hr II) 400 mg q 12 hr III) 800 mg q 4 hr	D&I	100%	10 – 25: I, II; 100%, III; 800 mg q 8 hr	I, II; 200 mg q 12 hr, III; 800 mg q 12 hr
Acyclovir IV ^{1,3}	2 – 4	5 – 12.4 mg/kg q 8 hr	D&I	26 – 50: 100% q 12 hr	10 – 25: 100% q 24 hr	50% q 24 hr
Amoxicillin/Clavulanate PO ^{1,4}	1.3/ 5 - 20	500 - 1000 mg TID	D&I	100%	50 – 100% BID ห้ามใช้ 1 g tab	50 – 100% OD ห้ามใช้ 1 g tab
Amoxicillin/Clavulanate IV ⁵	1.3/ 5 - 20	1.2 g q 8 hr	D&I	100%	1.2 g q 12 hr	1.2 g q 12 hr or 0.6 g q 8 hr
Ampicillin/Sulbactam IV	1/1.13	1.5 - 3 g Unasyn [®] q 6 hr	I	100%	15 - 29: 1.5 - 3 g q 12 hr 5 - 14: 1.5 - 3 g q 24 hr	
Bactrim (based on SMX) ⁵	11	100 mg/kg/day divided q 6 – 12 hr	D	100%	15 – 30: 50 mg/kg/day q 12 hr 3 day then 25 mg/kg/day q 12 hr	< 15: 25 mg/kg/day q 12 hr (not recommended)
Cefazolin ^{3,4}	1.9	1 – 2 g q 6 hr	I	35 – 54: 100% q 8 hr	11 – 34: 50% q 12 hr	50% q 18 – 24 hr
Cefotaxime ¹	1.7	2 g q 8 hr	I	q 12 - 24 hr		q 24 hr
Ceftazidime ^{3,4,5}	1.2	2 g q 8 hr	I	100% q 12 hr	16 – 30: 100% q 24 hr	6 - 15: 50% q 24 hr, < 5: 50% q 48 hr
Ciprofloxacin ^{3,4}	3 – 6	500 – 750 PO q 12 hr	D,I	100%	250 – 500 mg PO q 24 hr	
Ciprofloxacin ^{3,4}	3 – 6	200 – 400 IV q 12 hr	I	100%	200 – 400 mg IV q 24 hr	

Antimicrobials (ต่อ)

Drug	Normal Half life (hr)	Normal dose	Method	Adjustment for renal failure		
				Estimated CrCl (mL/min)		
				30 – 50	10 - 29	< 10
Clarithromycin ⁴	5 – 7	500 mg PO BID	D&I	100%	50%	
Clarithromycin	With Ritonavir		D&I	30 – 60: 50%	25%	
Colistin base ⁹	2 - 3	5 mg/kg/day divided q8hr or q12hr	D	20 – 40: 3.8 mg/kg/day divided q12hr 10 – 19: 2.5 mg/kg/day divided q12hr		
Didanosine ⁷	0.6– 1.6	250,400 mg q 24 hr (<60, ≥60 ตามลำดับ)	D	30 – 59 : 150, 200 mg	100, 150 mg	75, 100 mg
Doripenem ¹	1	500 mg q 8 hr	D&I	250 q 8 hr	250 q 12 hr	No data
Ertapenem ^{1,2,3}	4	1 g q 24 hr	D	100%	0.5 g q 24 hr	
Ethambutol ^{1,2,3}	4	15 – 25 mg/kg q 24 hr	I	q 24 – 36 hr		q 48 hr
Fluconazole ^{1,2,3}	37	100 – 400 mg q 24 hr	D	50%		
Fosfomycin ⁶	-	2 – 4 g q 12 hr	D	40-50: 1 g	20-30: 0.5 g	No data
Imipenem ¹	1	0.5 g q 6 hr	D&I	250 mg q 6 – 12 hr		125 - 250 mg q 12 hr
Lamivudine ⁷	5 – 7	150 mg q 12 hr or 300 mg q 24 hr	D&I	30 -49: 150 mg q 24 hr	15 -29: 100 mg q 24 hr	5 – 14: 50 mg <5 or HD: 25mg
		ให้ใช้ข้อมูลนี้สำหรับการปรับขนาดด้วยยาเม็ด		26 – 49: 150 mg, 10 – 25: 75 mg, <10 or HD: 37.5 mg		
Levofloxacin ^{1,2} PO, IV	6 – 8	750 mg q 24 hr	D&I	20 – 49 : 750 mg q 48 hr		< 20: 500mg q 48
		500 mg q 24 hr		20 – 49 : 250 mg q 24 hr		< 20: 250mg q 48
		250 mg q 24 hr		20 – 49 : 100%		< 20: 250mg q 48
Meropenem ^{1,3,4}	1	1 g q 8 hr	D&I	26 – 50 : 100% q12hr	10 – 25 : 50% q 12 hr	50% q 24 hr
Oseltamivir ^{1,4}	6 – 10	75 mg PO BID	I	100%	OD	
Penicillin G ¹	0.5	0.5 – 4 MU q 4 hr	D	75%		20 – 50%
Piperacillin ¹⁰	1	2.25 – 4.5 g q 6 – 8 hr	I	20 – 80: 4.5 g q 8 hr	< 20: 4.5 g q 12 hr	
Pyrazinamide ¹	9	25 mg/kg q 24 hr	D	100%		50 – 100%
Quinine ¹	5 – 16	650 mg q 8 hr	I	q 8 – 12 hr		q 24 hr
Rifampicin ¹	1.5 – 5	600 mg/day	D	50 – 100%		50 – 100%
Stavudine ⁷	1 – 1.4	30 mg q 12 hr	D&I	26 – 50: 20 mg q12 hr, 30 mg q24 hr (<60, ≥60 ตามลำดับ)		10 – 25 or HD: 20 mg q24 hr
Tenofovir ⁷	17	300 mg q 24 hr	I	300 mg q 48 hr	300 mg Twice weekly	No data
Vancomycin ¹	6	1 g q 12 hr	D&I	q 24 – 96 hr		q 4 – 7 day
Zidovudine ⁷	1.1 – 1.4	300 mg q 12 hr	D&I	< 15 or HD: 100 mg q 8 hr or 300 mg OD		

Other drugs

Drug	%Excrete d Renally	Normal dose	Adjustment for renal failure		
			Estimated CrCl (mL/min)		
			21 - 50	10 – 20	< 10
Allopurinol ⁵	30%	300 mg q 24 hr	200 – 300 mg/day	100 – 200 mg/day	100 mg/day or alternate day
Azathioprine	Most	Initial: 3 - 5mg/kg/day Then: 1 - 3mg/kg/day	75%		50%
Desmopressin ¹²	Most	-	Not recommended		
Diclofenac ⁵	< 1%	25 – 75 mg TID	100%	Avoid if possible	
Enoxaparin ^{3,4}	8%	30 mg or 1 mg/kg q 12 hr	< 30 : q 24 hr		
Fondaparinux ¹¹	77%	2.5 mg SC OD	VTE: < 30 : Not recommended UA/NSTEMI and STEMI: < 20 : Not recommended		
Ibuprofen ⁵	1%	200 – 400 mg TID	100%	Avoid if possible	
Ranitidine oral ^{3,4}	80%	150 mg BID or 300 mg OD	150 mg OD		
Ranitidine IV ^{3,4}	80%	50 mg q 8 hr	q 24 hr		

เอกสารอ้างอิง

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