Pharmacokinetics of anidulafungin from prospective clinical trials.

Author	Population	n	Weight (kg)	Dose	AUC (mg*h/L)	Cmax	CL (L/h)	VD (L)	Ref
Our obese population	Morbidly obese (BMI >40 kg/m^2)	8	149.7 (mean, range 124.1 –166.5)	100 mg single dose	74.4 ± 15.4 (mean $AUC_{0\text{-}inf}$, SD)	3.2 ± 0.6 (mean ± SD)	1.4 ± 0.3 (mean ± SD)	47.2 ± 5.9 (mean ± SD)	
Liu *et al.*	General patient population (n=262, pooled from 4 studies)[a]	262	61 (median, range 31 – 154)	2 studies with 100/50 for 14-21 days (n=129 and 19), one study with 100/50, 150/75, 200/100 for 15-42 days (n=87) and one study with 200/100 up to 90 days (n=27)	110.3 (estimated mean $AUC_{0\text{-}24}$, CV 32.5%) for a typical patient with fungal infection receiving 200/100 mg	7.2 (mean, CV 23.3%)	1.3 (mean, IIV 27.2%) for a typical male 70 kg patient with invasive candidiasis	V1 = 11.9 (for a 70 kg patient; no IIV) V2 = 23.5 (no IIV)	(1)
Liu *et al.*	ICU patients	20	65 (median, range 48 – 106)	200/100 mg for 10 -42 days	92.7 (mean $AUC_{0\text{-}24}$, CV 41%) [b]	7.7 (mean, CV 56%)	1.3 (mean, CV 51%)	38.8 (mean, CV 51%, n=10)	(2)
Van Wanrooij *et al.*	ICU patients	20	81 (median, IQR 72 – 102)	200/100 mg (unknown duration)	69.8 ± 24.1 (mean $AUC_{0\text{-}24}$, SD)	4.7 ± 1.4 (mean ± SD)	1.6 ± 0.6 (mean ± SD)	N/A	(3)
Leitner *et al.*	ICU patients on CVVH	10	85 (mean, SD 17)	200/100 mg (variable duration)	109.9 ± 49.8 (mean $AUC_{0\text{-}24}$, SD)	ND	1.08 ± 0.41 (mean ± SD)	42.0 ± 22.6 (mean ± SD)	(4)
Aguilar *et al.*	ICU patients on CVVHDF	12	77.5 (mean, SD 8.6)	200/100 mg. (d3)	104.1(mean $AUC_{0\text{-}24}$, SD ± 20.3 after venous sampling)	6.2 ± 1.7 (mean ± SD)	ND	ND	(5)
Brüggemann *et al.*	Haematological patients	20	77 (median, range 52 –113)	200 mg q48h (n=10) 300 mg q72h (n=10)	348.4 (310.6-386.7) ($AUC_{0\text{-}144}$, IQR, q48h) 359.4 (319.1-400.9) ($AUC_{0\text{-}144}$, IQR, q72h)	ND	1.49 (mean, IIV 20.2%)	V1 = 31.8; IIV 19.7%) and V2 = 23.1 (no IIV)	(6)
Liu *et al* 2014	Patients with invasive aspergillosis	140	68.3 (median, range 37-117)	200/100mg for a minimum of 14 days	ND, reference to pooled analysis by Liu et al.	ND	1.2 (mean, IIV 30%) for a typical male 70 kg patient	V1 = 8.91 (for a 70 kg patient; no IIV) V2 = 34.1 (no IIV)	(7)
Dowell *et al.*	Healthy volunteers	35	75.5 (median, SD ± 10.4, range 52.7 – 100.1)	200 mg (d4) 100 mg dose (d5 - 13)	103.4 ± 21.6 (geo mean $AUC_{0\text{-}24}$ + %CV)	6.88 ± 21.6 (geo mean + %CV)	0.99 ± 0.24 (mean ± SD)	35.2 ± 14.4 (mean ± SD)	(8)
Dowell *et al.*	Healthy volunteers	6	73.6 (median, range 56.8 – 88.6)	50 mg single dose	70 ± 13.4 ($AUC_{0\text{-}inf}$, mean + SD)	2.9 ± 0.7 (mean ± SD)	0.74 ± 0.15 (mean ± SD)	28.5 ± 6.5 (mean ± SD)	(9)
Dowell *et al.*	Mild hepatic impaired patients	6	82.3 (median, range 71.8 – 104.5)	50 mg single dose	56.0 ± 11.7 (mean $AUC_{0\text{-}inf}$ + SD)	2.2 ± 0.3 (mean ± SD)	0.93 ± 0.22 (mean ± SD)	39.4 ± 9.5 (mean ± SD)	(9)
Dowell *et al.*	Moderate hepatic impaired patients	6	68.4 (median, range 57.3 – 105.5)	50 mg single dose	68.6 ± 14.5 (mean $AUC_{0\text{-}inf}$ + SD)	2.3 ± 0.5 (mean ± SD)	0.76 ± 0.20 (mean ± SD)	36.5 ± 8.0 (mean ± SD)	(9)
Dowell *et al.*	Severe hepatic impaired patients	6-7	78.5 (median, range 54.4 – 117.3)	50 mg single dose	46.6 ± 14.1 (mean $AUC_{0\text{-}inf}$ + SD)	1.8 ± 0.8 (mean ± SD)	1.16 ± 0.34 (mean ± SD)	50.8 ± 17.0 (mean ± SD)	(9)
Dowell *et al.*	Healthy volunteers	8	84.8 (median, range 68.5 – 95.3)	50 mg single dose	51.1 ± 5.0 (mean $AUC_{0\text{-}inf}$ + SD)	2.1 ± 0.2 (mean ± SD)	0.99 ± 0.10 (mean ± SD)	41.2 ± 2.8 (mean ± SD)	(9)

Dowell *et al.*	Mild renal impaired patients	6	85.4 (median, range 73.0 – 108.9)	50 mg single dose	52.5 ± 15.2 (AUC0-inf, mean + SD)	2.2 ± 0.5 (mean ± SD)	1.01 ± 0.25 (mean ± SD)	37.6 ± 8.9 (mean ± SD)	(9)
Dowell *et al.*	Moderate renal impaired patients	7	87.1 (median, range 73.6 – 104.8)	50 mg single dose	58.7 ± 12.3 (AUC0-inf, mean + SD)	2.6 ± 0.8 (mean ± SD)	0.88 ± 0.19 (mean ± SD)	35.6 ± 9.4 (mean ± SD)	(9)
Dowell *et al.*	Severe renal impaired patients	5	77.1 (median, range 50.3 – 123.8)	50 mg single dose	56.5 ± 10.4 (AUC0-inf, mean + SD)	2.4 ± 0.4 (mean ± SD)	0.91 ± 0.15 (mean ± SD)	39.6 ± 9.4 (mean ± SD)	(9)
Dowell *et al.*	End-stage renal disease	3	71.9 (median, range 59.4 – 110.2)	50 mg single dose	48.1 ± 5.0; predialysis / 58 ± 20.2 postdialysis (AUC0-inf, mean + SD)	1.9 ± 0.2; predialysis / 2.6 ± 0.8; postdialysis (mean ± SD)	1.05 ± 0.1; predialysis / 0.94 ± 0.34; postdialysis	37.9 ± 3.8; predialysis / 36.7 ± 12.3; postdialysis	(9)
Dowell *et al.*	Healthy volunteers	17	ND (BMI 25 median, range 22 – 30)	200 mg (d1) 100 mg dose (d2-4)	120.3 ± 24.1 (AUC0-24, mean + SD)	7.9 ± 1.6 (mean ± SD)	0.87 ± 0.20 (mean ± SD)	40.1 ± 9.6 (mean ± SD)	(10)
Dowell *et al.*	Healthy volunteers	12	78.0 ± 20.0 (mean ± SD)	200 mg (d1) 100 mg dose (d2-8)	104.5 (AUC0-24, mean, CV 28.7%)	7.5 (mean, CV 32.5%)	1.04 (mean, CV 33.1%)	ND	(11)

ND = not determined / not available / not reported

[a] This paper includes a subset of healthy volunteers and patients previously reported by Dowell et al in J Clin Pharmacol 2004. The analysis of Liu et al contains all original data from Dowell *et al* as well as additional data after ongoing studies were completed.

[b] 1 patient of 240 kg (BMI 83 kg/m2) receiving 150 mg (instead of 100 mg maintenance dose): AUC0-24 = 55.3 mg*h/L. AUC0-24 (extrapolated): 37 mg*h/L. This patient was excluded from the analysis.

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