

Title: Effectiveness and cost-effectiveness of prophylactic voriconazole and fluconazole regarding prevention of post-hematopoietic stem cell transplantation invasive fungal infection and its related death: A single center experience

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Comparison of IFI and IRD rates between voriconazole and fluconazole arms in patient subgroups:

Patient subgroups		Allogeneic HSCT						ASCT					
		IFI			IRD			IFI			IRD		
		V	F	P	V	F	P	V	F	P	V	F	P
Age	>mean†	1/6 (16.7%)	3/8 (37.5%)	0.393	1/6 (16.7%)	1/8 (12.5%)	0.825	2/10 (20%)	3/9 (33.3%)	0.510	0/10 (0%)	1/9 (11.1%)	0.279
	<mean†	3/11 (27.3%)	3/9 (33.3%)	0.769	1/11 (9.1%)	1/9 (11.1%)	0.881	2/8 (25%)	3/9 (33.3%)	0.707	0/8 (0%)	1/9 (11.1%)	0.331
Sex	Male	4/13 (30.8%)	2/8 (25%)	0.776	2/13 (15.4%)	0/8 (0%)	0.243	1/8 (12.5%)	2/12 (16.7%)	0.798	0/0	0/0	*****
	Female	0/4 (0%)	4/9 (44.4%)	0.109	0/4 (0%)	2/9 (22.2%)	0.305	3/10 (30%)	4/6 (66.7%)	0.152	0/10 (0%)	2/6 (33.3%)	0.051
HCT-CI	0	3/13 (23.1%)	4/14 (28.6%)	0.745	1/13 (7.7%)	1/14 (7.1%)	0.957	2/14 (14.3%)	5/16 (31.2%)	0.273	0/14 (0%)	1/16 (6.2%)	0.341
	1	1/4 (25%)	1/2 (50%)	0.540	1/4 (25%)	0/2 (0%)	0.439	2/3 (66.7%)	0/1 (0%)	0.248	0/3 (0%)	0/1 (0%)	*****
	2	0/0	1/1 (100%)	*	0/0	1/1 (100%)	****	0/1 (0%)	1/1 (100%)	0.157	0/1 (0%)	1/1 (100%)	0.157
Diagnosis	AL	3/12 (25%)	0/7 (0%)	0.149	1/12 (8.3%)	0/7 (0%)	0.433	0/0	0/0	**	0/0	0/0	**
	BM failure	1/2 (50%)	3/5 (60%)	0.809	1/2 (50%)	1/5 (20%)	0.427	0/0	0/0	**	0/0	0/0	**
	MPN/MDS	0/2 (0%)	1/3 (33.3%)	0.361	0/2 (0%)	0/3 (0%)	*****	0/0	0/0	**	0/0	0/0	**
	R/R lymphoma	0/1 (0%)	2/2 (100%)	0.083	0/1 (0%)	1/2 (50%)	0.386	2/8 (25%)	4/11 (36.4%)	0.599	0/8 (0%)	1/11 (9.1%)	0.381
	MM/PCL	0/0	0/0	**	0/0	0/0	**	2/10 (20%)	2/7 (28.6%)	0.682	0/10 (0%)	1/7 (14.3%)	0.218
TBI-based conditioning	+ve	2/5 (40%)	1/2 (50%)	0.809	0/5 (0%)	1/2 (50%)	0.088	0/0	0/0	**	0/0	0/0	**
	-ve	2/12 (16.7%)	5/15 (33.3%)	0.326	2/12 (16.7%)	1/15 (6.7%)	0.411	4/18 (22.2%)	6/18 (33.3%)	0.457	0/18 (0%)	2/18 (11.1%)	0.146
RIC	+ve	2/5 (40%)	3/4 (75%)	0.294	1/5 (20%)	1/4 (25%)	0.858	0/0	0/0	**	0/0	0/0	**
	-ve	2/12 (16.7%)	3/13 (23.1%)	0.689	1/12 (8.3%)	1/13 (7.7%)	0.953	4/18 (22.2%)	6/18 (33.3%)	0.457	0/18 (0%)	2/18 (11.1%)	0.146
ATG use	+ve	2/5 (40%)	2/2 (100%)	0.147	1/5 (20%)	1/2 (50%)	0.427	0/0	0/0	**	0/0	0/0	**
	-ve	2/12 (16.7%)	4/15 (26.7%)	0.535	1/12 (8.3%)	1/15 (6.7%)	0.869	4/18 (22.2%)	6/18 (33.3%)	0.457	0/18 (0%)	2/18 (11.1%)	0.146
Steroid use	+ve	4/9 (44.4%)	5/8 (62.5%)	0.457	2/9 (22.2%)	2/8 (25%)	0.893	1/7 (14.3%)	1/4 (25%)	0.658	0/7 (0%)	0/4 (0%)	*****
	-ve	0/8 (0%)	1/9 (11.1%)	0.331	0/8 (0%)	0/9 (0%)	*****	3/11 (27.3%)	5/14 (35.7%)	0.653	0/11 (0%)	2/14 (14.3%)	0.191
Donor	ASCT	0/0	0/0	**	0/0	0/0	**	4/18 (22.2%)	6/18 (33.3%)	0.457	0/18 (0%)	2/18 (11.1%)	0.146
	MRD	3/14 (21.4%)	6/17 (35.3%)	0.397	1/14 (7.1%)	2/17 (11.8%)	0.665	0/0	0/0	**	0/0	0/0	**
	Haploidentical	1/3 (33.3%)	0/0	***	1/3 (33.3%)	0/0	***	0/0	0/0	**	0/0	0/0	**
Graft failure	+ve	3/4 (75%)	3/3 (100%)	0.350	2/4 (50%)	1/3 (33.3%)	0.659	0/0	1/2 (50%)	***	0/0	1/2 (50%)	***
	-ve	1/13 (7.7%)	3/14 (21.4%)	0.315	0/13 (0%)	1/14 (7.1%)	0.326	4/18 (22.2%)	5/16 (31.2%)	0.551	0/18 (0%)	1/16 (6.2%)	0.282
Grade II-IV GVHD	+ve	3/4 (75%)	2/6 (33.3%)	0.197	1/4 (25%)	0/6 (0%)	0.197	0/0	0/0	**	0/0	0/0	**
	-ve	1/13 (7.7%)	4/11 (36.4%)	0.085	1/13 (7.7%)	2/11 (18.2%)	0.439	4/18 (22.2%)	6/18 (33.3%)	0.457	0/18 (0%)	2/18 (11.1%)	0.146

Abbreviations: HSCT, Hematopoietic Stem Cell Transplantation; ASCT, Autologous stem cell transplantation; IFI, Invasive fungal infection; IRD, Invasive fungal infection-related death; V, Voriconazole; F, Fluconazole; HCT-CI, Hematopoietic cell transplantation comorbidity index; AL, Acute leukemia; BM, Bone marrow; MPN, Myeloproliferative neoplasm; MDS, Myelodysplastic syndrome; R/R, relapsed/refractory; MM, Multiple myeloma; PCL, Plasma cell leukemia; TBI, Total body irradiation; RIC, Reduced intensity conditioning; ATG, Antithymocyte globulin; MRD, Matched related donor; GVHD, Graft versus host disease

†mean age in Allogeneic HSCT group = 28.5 years; mean age in ASCT group = 43.2 years

*no statistics are computed because antifungal prophylaxis and IFI are constants

**no statistics are computed because no cases were censored

***no statistics are computed because antifungal prophylaxis is a constant

****no statistics are computed because antifungal prophylaxis and IRD are constants

*****no statistics are computed because IRD is a constant