

Supplementary Table 1. Antibiotic plasma levels of patients with intraoperative positive cultures, bacterial species from surgical samples, MICs of antimicrobials used in prophylaxis and serum bactericidal titers against the isolated bacteria.

Antimicrobial prophylaxis	Patient	Free plasma concentration (mg/L)				Bacterial species	MIC (mg/L)				Reciprocal SBT	
		CFZ	GEN	CXM	VAN		CFZ	GEN	CXM	VAN		
Cefazolin	02/004	20.4				<i>Staphylococcus epidermidis</i> ^{1,2}	1				64	
						<i>Staphylococcus epidermidis</i> ¹	0.38				256	
						<i>Corynebacterium afermentans</i>	0.75				128	
	02/013	19.9				<i>Staphylococcus epidermidis</i> ²	2				128	
	02/014	15.2				<i>Cutibacterium acnes</i>	0.5				256	
	02/016	25.3				<i>Cutibacterium acnes</i>	0.125					ND
						<i>Staphylococcus hominis</i> ²	3				ND	
	02/036	15.2				<i>Staphylococcus epidermidis</i>	0.25					256
						<i>Micrococcus luteus</i>	0.38				256	
	02/038	19.5				<i>Cutibacterium acnes</i>	0.25				512	
	02/040	19.7				<i>Staphylococcus hominis</i>	0.38					512
						<i>Cutibacterium acnes</i>	0.25				64	
	02/046	18.8				<i>Micrococcus luteus</i>	0.5				128	
	02/048	33.2				<i>Staphylococcus epidermidis</i>	0.25					512
						<i>Corynebacterium propinquum</i>	0.032				1024	
<i>Cutibacterium accolens</i>						0.125				512		
<i>Cutibacterium acnes</i>						0.75				32		
	median (range)	19.7 (15.2-33.2)					0.38 (0.032-3)				256 (32-1024)	
Cefazolin + Gentamicin	01/001	15.8	12.2			<i>Cutibacterium acnes</i>	0.19	8			256	
	01/005	17.4	13.5			<i>Cutibacterium acnes</i>	0.125	24			256	
	01/016	17.3	12.1			<i>Staphylococcus hominis</i>	0.5	0.047			512	

Antimicrobial prophylaxis	Patient	Free plasma concentration (mg/L)				Bacterial species	MIC (mg/L)				Reciprocal SBT	
		CFZ	GEN	CXM	VAN		CFZ	GEN	CXM	VAN		
Antimicrobial prophylaxis	01/019	16.6	13.7			<i>Staphylococcus epidermidis</i>	0.38	0.064			256	
						<i>Staphylococcus warneri</i> ²	32	24			16	
	01/021	13.9	11.5			<i>Cutibacterium acnes</i>	0.19	12			128	
	01/023	15.7	13			<i>Cutibacterium acnes</i>	0.19	8			512	
	01/027	16.96	19.4			<i>Cutibacterium acnes</i>	0.38	8			128	
	01/032	12.7	12.6			<i>Staphylococcus pettenkoferi</i>	2	0.064				1024
						<i>Staphylococcus hominis</i>	0.5	0.047			512	
						<i>Cutibacterium acnes</i>	0.38	8			256	
	01/033	18.8	14.2			<i>Staphylococcus simulans</i>	1.5	0.125				256
						<i>Cutibacterium acnes</i>	0.125	12			256	
						<i>Paenibacillus lautus</i>	64	0.75			8	
	01/035	16.8	11.7			<i>Staphylococcus hominis</i>	0.38	0.047				1024
						<i>Staphylococcus epidermidis</i>	0.5	0.094			256	
	01/036	11.2	9.9			<i>Corynebacterium pseudodiphtheriticum</i>	0.094	0.064				1024
						<i>Cutibacterium acnes</i>	0.19	8			128	
						<i>Staphylococcus hominis</i>	0.5	0.047			32	
						<i>Cutibacterium acnes</i>	0.25	8			128	
	01/048	17.3	14			<i>Cutibacterium acnes</i>	0.5	8			512	
	01/040	20.1	12.5			<i>Cutibacterium acnes</i>	0.5	8			512	
	01/024	ND	ND			<i>Cutibacterium acnes</i>	ND	ND			ND	
median (range)	16.8 (11.2-20.1)	12.6 (9.9-19.4)				0.38 (0.094-64)	8 (0.047-24)				256 (8-1024)	
Cefuroxime	02/017			12.7		<i>Staphylococcus epidermidis</i>			0.125		256	
	02/018			44.2		<i>Cutibacterium acnes</i>			0.064		128	
	02/020			11		<i>Micrococcus luteus</i>			0.38		16	

Antimicrobial prophylaxis	Patient	Free plasma concentration (mg/L)				Bacterial species	MIC (mg/L)				Reciprocal SBT
		CFZ	GEN	CXM	VAN		CFZ	GEN	CXM	VAN	
	02/021			30.5		<i>Micrococcus luteus</i>			0.5		64
	02/022			20.5		<i>Staphylococcus hominis</i>			0.38		64
	02/023			28.0		<i>Cutibacterium acnes</i>			0.032		128
	02/026			38.5		<i>Micrococcus luteus</i>			0.5		128
	02/027			29.3		<i>Cutibacterium acnes</i>			0.016		1024
	02/058			23.2		<i>Staphylococcus epidermidis</i>			0.75		64
						<i>Staphylococcus simulans</i>			2		16
						<i>Cutibacterium avidum</i>			0.25		128
	02/059			24.3		<i>Kocuria rhizophila</i>			0.094		16
						<i>Micrococcus luteus</i>			0.38		16
	02/060			30.3		<i>Staphylococcus epidermidis</i>			0.25		128
						<i>Staphylococcus hominis</i>			1		32
						<i>Staphylococcus capitis</i>			0.75		8
						<i>Cutibacterium acnes</i>			0.064		128
	02/062			18.2		<i>Corynebacterium simulans</i>			0.75		128
						<i>Corynebacterium mucifaciens</i>			0.094		8
						<i>Staphylococcus epidermidis</i> ²			16		16
						<i>Staphylococcus hominis</i>			0.5		32
						<i>Micrococcus luteus</i>			0.5		64
	02/024			26.6		<i>Actinomyces neuii</i>			0.023		128
						<i>Staphylococcus haemolyticus</i>			3		16
	median (range)			26.6 (11-44.2)				0.38 (0.016-16)		64 (8-1024)	
Cefuroxime +	01/051		8.6	34.9		<i>Staphylococcus epidermidis</i>		0.25	0.38		64
						<i>Staphylococcus hominis</i>		0.38	0.5		256

Antimicrobial prophylaxis	Patient	Free plasma concentration (mg/L)				Bacterial species	MIC (mg/L)				Reciprocal SBT
		CFZ	GEN	CXM	VAN		CFZ	GEN	CXM	VAN	
Gentamicin	01/063		11.9	25.7		<i>Cutibacterium acnes</i>		12	0.032		64
	01/066		9.9	24.2		<i>Staphylococcus hominis</i>		0.064	0.75		8
	01/070		10.6	25.1		<i>Cutibacterium acnes</i>		8	0.047		256
						<i>Staphylococcus saccharolyticus</i>		0.25	0.023		256
	02/029		14.4	14.5		<i>Cutibacterium acnes</i>		8	0.5		32
						<i>Staphylococcus epidermidis</i>		0.25	0.19		256
	02/030		9.2	31.0		<i>Staphylococcus epidermidis</i>		0.064	0.38		128
	02/035		9.9	17.1		<i>Cutibacterium acnes</i>		12	0.023		ND
	02/043					<i>Cutibacterium acnes</i>		12	0.016		256
			8.5	21.8		<i>Staphylococcus epidermidis</i>		0.25	0.25		256
					<i>Staphylococcus hominis</i>		0.094	0.25		1024	
02/032		ND	ND		<i>Staphylococcus epidermidis</i>		ND	ND		ND	
					<i>Staphylococcus warneri</i>		ND	ND		ND	
	median (range)		9.9 (8.5-14.4)	24.7 (14.5-34.9)			0.25 (0.064-12)	0.25 (0.016-0.75)		256 (8-1024)	
Vancomycin	02/025				5.2	<i>Staphylococcus epidermidis</i>				1.5	8
						<i>Staphylococcus warneri</i>				0.25	16
	02/049				7.5	<i>Staphylococcus epidermidis</i>				2	8
	02/050				19.0	<i>Micrococcus luteus</i>				0.25	256
						<i>Cutibacterium acnes</i>				0.125	64
	02/052				7.7	<i>Cutibacterium acnes</i>				0.25	32
	02/054				7.5	<i>Cutibacterium acnes</i>				0.25	64
	02/015				4.6	<i>Cutibacterium acnes</i>				0.25	32
	median (range)				7.6 (4.6-19.0)				0.25 (0.125-2)	32 (8-256)	

Antimicrobial prophylaxis	Patient	Free plasma concentration (mg/L)				Bacterial species	MIC (mg/L)				Reciprocal SBT	
		CFZ	GEN	CXM	VAN		CFZ	GEN	CXM	VAN		
Vancomycin + Gentamicin	01/014	14.5			8.5	<i>Cutibacterium acnes</i>		24			0.25	128
	01/041		15.2		8	<i>Cutibacterium acnes</i>		8			0.19	64
							<i>Staphylococcus epidermidis</i>		0.047		1.5	64
	01/045		13.3		8	<i>Dermabacter hominis</i>		8			0.25	128
							<i>Staphylococcus epidermidis</i>		0.047		1.5	256
	01/052		9.8		5.4	<i>Staphylococcus caprae</i>		0.25			0.75	256
	01/053		11.6		5.1	<i>Cutibacterium acnes</i>		8			0.25	16
	01/046		13.9		7.8	<i>Cutibacterium acnes</i>		8			0.19	32
median (range)		13.6 (9.8-15.2)		7.9 (5.1-8.5)			8 (0.047-24)			0.25 (0.19-1.5)	96 (16-256)	

CFZ, cefazolin; GEN, gentamicin; CXM, cefuroxime; VAN, vancomycin; MIC, minimum inhibitory concentration; SBT, serum bactericidal titer; ND, not done. The cases in which the plasma concentrations were lower than the MIC are indicated in boldface.

¹Patient 02/004 had two *S. epidermidis* isolates with different antibiotypes.

²Resistance to oxacillin.