



Sinhgad Technical Education Society's



Smt. Kashibai Navale Medical College & General Hospital
Narhe, Pune

POCKET DIARY

(Antibiotic Guide for Hospital Infections)





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PREPARED BY	DESIGNATION: Dept of Pharmacology and Microbiology NAME: _____ SIGNATURE: _____ Dr. Uma Bhande (Professor And Head Pharmacology) Dr. Sachin Kumar Wadhvani (Professor And Head Microbiology)
APPROVED BY	DESIGNATION: DEPARTMENT & DR. PATE NAME: Dr. H.D. Patil (Professor Singh Chaudhary) (H.D. Community Medicine) SIGNATURE: _____
RESPONSIBILITY OF EXECUTING	DESIGNATION: Dept of Pharmacology and Microbiology NAME: _____ SIGNATURE: _____ Dr. Uma Bhande (Professor And Head Pharmacology) Dr. Sachin Kumar Wadhvani (Professor And Head Microbiology)

Antibiogram

SAMPLES RECEIVED IN UTI ARE ; URINE OR FOLEY'S TIP

Processing of specimen-

Urine is processed by semiquantitative method of i.e. Calibrated loop method.

samples are screened for significant bacteriuria by this method.

samples which show 10^5 CFU/ml are processed for identification and antibiotic susceptibility testing.

Urinary tract infections (UTI) Antibiogram

Most common pathogens	Escherichia coli	Enterococcus spp	Pseudomonas aeruginosa	Methicillin resistant coagulase negative staphylococci	Citrobacter spp	Klebsiella pneumoniae	Acinetobacter spp	Candida spp
Microbiology data (n= 911) IPD Prevalance %	18	7.7	7.1	5.6	5	4.5	2.5	–
Microbiology data (n= 380) OPD Prevalance %	12.9	3.9	–	12.1	3.4	2.4	–	–
Microbiology data (n= 32) ICU Prevalance %	25	15.6	9.4	–	3.1	3.1	3.1	9.4
Antibiotic Sensitivity %	IPD		OPD			ICU		
Amikacin	57.6		85.2			60		
Ampicillin	4.4		2.5			0		
Cefotaxime	5.9		14.8			0		
Co-trimoxazole	33.4		52.9			31.3		
Doxycycline	35.7		55.5			28.6		
Imipenem	25.4		28.1			0		
Nitrofurantoin	77.4		85.2			61.9		
Norfloxacin	16.5		27.7			28.6		
Ofloxacin	27.5		30.9			13.3		
Piperacillin	4.9		16.7			0		
Piperacillin-tazobactam	10.8		55.6			20		
Gentamicin	52.3		71.6			66.7		
Carbenecillin	7.7		0			0		
Cefazolin	3.5		6.8			0		
Penicillin G	1.5		2.7			0		
Teicoplanin	97.8		100			50		
Vancomycin	100		100			100		

**SAMPLES RECEIVED IN BLOOD STREAM INFECTIONS ARE ;
BLOOD CULTURE, STERILE BODY FLUIDS LIKE CSF & CENTRAL LINE TIPS**

Processing of specimen-

Blood cultures are processed by doing 3 alternate day subcultures

If growth is present isolate is identified and antibiotic sensitivity testing done

Blood stream infections (BSI) IPD Antibigram

Most common pathogens	Acinetobacter spp	Methicillin resistant coagulase negative staphylococci	Pseudomonas aeruginosa	Escherichia coli	Citrobacter spp	Klebsiella pneumoniae	Nonfermenting gram negative bacilli
Microbiology data (n= 1215) IPD Prevalence %	1.7	0.9	0.7	0.7	0.7	0.5	–
Microbiology data (n= 181) ICU Prevalence %	3.3	1.7	–	–	–	–	1.1
Antibiotic Sensitivity %	IPD				ICU		
Amikacin	50.7				66.6		
Ampicillin	4.1				0		
Cefotaxime	9.6				0		
Co-trimoxazole	30.9				55.5		
Chloramphenicol	53.4				77.7		
Imipenem	13.6				0		
ciprofloxacin	30.9				55.5		
Ofloxacin	24.5				55.5		
Piperacillin	4.9				0		
Piperacillin-tazobactam	36.9				22.2		
Gentamicin	54.3				66.6		
Cefazolin	0				0		
Penicillin G	4.8				0		
Teicoplanin	71.4				100		
Vancomycin	100				100		

**SAMPLES RECEIVED IN RESPIRATORY INFECTIONS ARE ;
SPUTUM, BAL, ENDOTRACHEAL SECRETIONS AND ENDOTRACHEAL TIP**

Processing of specimen

Sputum samples are processed after screening for quality of sputum whether saliva or purulent sputum

samples which show 10^5 CFU/ml are processed for identification and antibiotic susceptibility testing.

Respiratory infections Antibiogram

Most common pathogens	Eschereschia coli	Pseudomonas aeruginosa	Citrobacter spp	Klebsiella pneumoniae	Acinetobacter spp
Microbiology data (n= 609) IPD Prevalance %	2.9	9	2.1	7.7	-
Microbiology data (n= 98) OPD Prevalance %	-	3	1.1	5.1	-
Microbiology data (n= 148) ICU Prevalance %	-	13.5	-	6.1	16.2
Antibiotic Sensitivity %	IPD	OPD		ICU	
Amikacin	94.8	100		44.4	
Ampicillin	0	0		0	
Cefotaxime	5.8	50		0	
Co-trimoxazole	29.2	50		33.3	
Doxycycline	29.2	60		33.3	
Imipenem	24.8	20		11.1	
Ciprofloxacin	56.2	80		33.3	
Ofloxacin	22.6	70		11.1	
Piperacillin	38.1	33.3		0	
Piperacillin-tazobactam	50.4	70		55.5	
Gentamicin	72.3	100		55.5	
Carbencillin	41.8	66.6		0	
Cefazolin	26.9	NA		NA	
Penicillin G	0	NA		NA	
Teicoplanin	88.4	NA		NA	
Vancomycin	100	NA		NA	

**SAMPLES RECEIVED IN SKIN AND SOFT TISSUE INFECTIONS ARE ;
PUS, WOUND SWABS, TISSUE**

Processing of specimen-

Samples are processed by standard microbiological techniques

Skin and Soft Tissue Infections Antibiogram

Most common pathogens	Escheres chia coli	Pseudomonas aeruginosa	Methicillin resistant coagulase negative staphylococci	Klebsiella pneumoniae	Acinetobacter spp
Microbiology data (n= 1160) IPD Prevalence %	28.4	10.1	9.22	7.8	10
Microbiology data (n= 120) OPD Prevalence %	10.8		12.1		
Microbiology data (n= 208) ICU Prevalence %	23.7		15.6		34.4
Antibiotic Sensitivity %	IPD	OPD		ICU	
Amikacin	57.4	78.1		18.8	
Ampicillin	3.1	6.3		0	
Cefotaxime	3.9	12.5		0	
Co-trimoxazole	32.3	25		40.9	
Doxycycline	30.6	31.3		18.8	
Imipenem	15.6	18.8		7.4	
Ciprofloxacin	32.6	46.9		24.6	
Ofloxacin	17.1	31.3		7.4	
Piperacillin	17.9	37.5		7.7	
Piperacillin-tazobactam	27.4	46.9		69.2	
Gentamicin	48.2	65.6		16.4	
Carbencillin	14.5	25		0	
Cefazolin	7.4	25.7		12.5	
Penicillin G	0.6	0		0	
Teicoplanin	65.2	80		100	
Vancomycin	100	100		100	

1. Medicine

Clinical condition	Empiric antibiotics/ 1 st line antibiotics	Alternative antibiotics	Remarks/Comments
1. Urinary tract infection (UTI)	Nitrofurantoin 100mg orally BD for 7 days Cotrimoxazole 960mg 12 hourly for 3-5 days Amikacin 1g OD IM/IV Gentamicin 7mg/kg/d OD IM or IV Norfloxacin 400mg BD for 7 days	Piperacillin-Tazobactam 4.5g IV 6 hourly OR Imipenem 1g IV 8 hourly OR Ofloxacin 200-400mg 12 hourly OR Vancomycin 15 mg/kg IV 12 hourly	Get urine cultures before antibiotics & modify therapy based on sensitivities. Monitor renal function if aminoglycoside is used
2. Upper respiratory tract infections	Azithromycin 500mg od for 3 days OR Roxithromycin 300mg od for 5 days Ciprofloxacin 500mg orally 12 hourly for 3-5 days Cefazolin 2gm IV stat Cotrimoxazole 960mg 12 hourly for 3-5 days	Amoxyclav 625mg 1-1-1 for 7 days Cefixime CV 200mg 1-0-1 for 7 days OR Teicoplanin 6-30 mg/kg/day IV OR Cefotaxime 1-2gm 6-8 hourly	
3. Lower respiratory tract infection	Amikacin 15mg/Kg/day q 8-12 hours IV Gentamicin 7.5mg/kg/day OD i.m or i.v for 10 days Inj. Amoxyclav 1gm 1-0-1 for 7 days Cefotaxime 500mg 1-1-1 for 7 days Roxythromycin 300mg I.V. 1-0-1 Cefazoline 0.52 gm 6-8 hourly IV Ciprofloxacin 500mg 12 hourly Doxycycline 100mg 12 hourly orally	Imipenem 1g IV 8hourly OR Meropenem 1g IV 8hourly Piperacillin – Tazobactam 4.5gm IV 8 hourly for 7-10 days. Ofloxacin 200-400mg orally 12 hourly Vancomycin 15mg/kg IV 12 hourly	Amikacin max doses 1.5mg/Kg If a typical pneumonia suspected, Doxycycline 100mg bd
4. Enteric fever	Ceftriaxone 1gm IV 8 hours Till afebrile then 1gm 1-0-1 for 7 days Chloramphenicol 500mg qid orally Ciprofloxacin 750mg 12 hourly	Ofloxacin 15mg/kg/d in two divided doses. Meropenem 1gm IV 8 hourly till afebrile then 12 hourly for 7 days.	Change empiric regimen based on susceptibility testing. Duration of treatment: 10-14 days. Antibiotic therapy should be continued till one week post-fever defervescence
5. Septicemia	Amikacin 15mg/Kg/day q 8-12	Imipenem 1g IV 8hourly OR	

		<p>hours IV</p> <p>Gentamicin 1mg/kg IM or IV 8 hourly</p> <p>Ceftriaxone 1gm 8 hourly</p> <p>Ciprofloxacin 400 mg IV 12 hourly</p>	<p>Meropenem 1g IV 8hourly</p> <p>Piperacillin –</p> <p>Tazobactam 4.5gm IV 8 hourly for 7-10 days.</p> <p>Ofloxacin 15mg/kg/d in two divided doses</p> <p>Vancomycin 15mg/kg IV 12 hourly</p> <p>Teicoplanin 6-30 mg/kg/day IV</p>	
6.	Pyrexia of unknown origin (PUO)	<p>Ceftriaxone 2gm IV orally 24 hourly</p> <p>OR</p> <p>Cefotaxime 50mg/kg/dose 6 hourly IV</p> <p>Amikacin 15mg/Kg/day 8-12 hourly IV</p>		
7.	VAP (Ventilator Associated Pneumonia)	<p>Piperacillin-tazobactam 4.5g IV 6 hourly</p> <p>Amikacin 20mg/Kg/day 8-12 hourly IV</p> <p>Gentamicin 7mg/kg/d IM or IV 8 hourly</p> <p>Tobramycin 7mg/kg/d</p> <p>Ciprofloxacin 400 mg 8 hourly</p> <p>Levofloxacin 750 mg daily</p> <p>Vancomycin 15 mg/kg 12 hourly</p> <p>Imipenem 1g IV 8hourly</p>	<p>Meropenem 1g IV 8hourly</p> <p>OR</p> <p>Teicoplanin 6-30 mg/kg/day IV</p>	
8.	Meningitis	<p>Ceftriaxone 1-2 gm 12-24 hourly IV</p> <p>Cefotaxime 1-2 gm 6-8 hourly IV</p> <p>Amikacin 20mg/Kg/day 8-12 hourly IV</p> <p>Gentamicin 7mg/kg/d IM or IV 8 hourly for 10-14 days</p>	<p>Vancomycin 15 mg/kg 12 hourly</p> <p>Meropenem 2gm IV 8 hourly</p>	
9.	Diarrhoea / Dysentery	<p>Doxycycline 300 mg oral stat only for Cholera</p> <p>Norfloxacin 200-400mg 12 hourly orally</p> <p>Gentamicin 1mg/kg IM or IV 8 hourly</p> <p>Rifaximin</p>	<p>Ceftriaxone 2 gm IV OD for 5 days</p> <p>Ofloxacin 200-400mg 12 hourly</p>	

		200mg 1-0-1 for 5 days Amikacin 15mg/Kg/day q 8-12 hours IV		
10	Empiric therapy of suspected Gram positive infections	Cefazolin 2 g IV q8h Or Cloxacillin 2 g IV q6h	Amoxicillin-clavulanate 1.2 g IV q8h or Penicillin G 20 laks IV q4h (if <i>S.aureus</i> excluded) or Vancomycin (if anaphylactic penicillin allergy or MRSA clinically possible)	Adjust regimen after receipt of culture and susceptibility data. Duration of treatment will depend on final diagnosis.
11	Empiric therapy for suspected Gram negative infections (eg pyelonephritis or intra-abdominal infections)	Piperacillin-tazobactam 4.5 g IV q6h or Cefoperazone-sulbactam 3 g IV q12h	Imipenem 1 g IV q8h or Meropenem 1 g IV q8h or Ertapenem 1 g IV od (carbapenems preferred for more seriously ill patients)	Separate anaerobic coverage unnecessary for IAI, when using BL-BLIs or carbapenems. De-escalate to ciprofloxacin, cotrimoxazole or third generation cephalosporin if isolate is sensitive. Duration of treatment: 10-14 days for pyelonephritis, 4-7 days for IAI.
12	Rickettsial infections	Doxycycline 100 mg po or IV bd	Azithromycin 500 mg po or IV od, chloramphenicol 500mg qid	Duration of treatment: 7 days
13	Leptospirosis	Penicillin G 20 laks IV q4h or Doxycycline 100 mg po or IV bd	Ceftriaxone 2 g IV od	Duration of treatment: 7 days
14	Vivax malaria	Chloroquine 25 mg/kg body weight divided over three days i.e. 10 mg/kg on day 1, 10 mg/kg on day 2 and 5 mg/kg on day 3.	Artemether-lumefantrine (1 tab bd for 3 days)	Followed by primaquine (0.25 mg/kg daily for 14 days)
15	Falciparum malaria	Artesunate 4 mg/kg body weight daily for 3 days Plus Sulfadoxine (25 mg/kg body weight) and Pyrimethamine (1.25 mg/kg body weight) on first day.	Artemether-lumefantrine (1 tab bd for 3 days)	Followed by primaquine single dose (0.75 mg/kg). All mixed infections should be treated with full course of ACT and primaquine 0.25 mg per kg daily for 14 days.

16	<i>C. difficile</i> Colitis Mild disease	Metronidazole 400 mg orally three times daily for 10 to 14 days	Vancomycin 125 mg orally four times daily	Stop any ongoing antibiotic, if possible. Substitute with low-risk antibiotic if possible. Correction of fluid and electrolyte imbalance
17	<i>C. difficile</i> Colitis Severe disease	Vancomycin 125 mg orally four times daily for 10 to 14 days, can be increased to 500 mg 4 times daily	If not able to tolerate oral vancomycin, vancomycin retention enema (500 mg in 100 ml normal saline given six hourly) with intravenous metronidazole 500 mg 8 hourly.	Monitor organ function closely; Consider surgery for severe persistent symptoms, toxic megacolon, severe ileus, or peritonitis.
18	Cholera	Doxycycline 300 mg PO stat	Azithromycin 1 gm PO stat or Ciprofloxacin 500 mg BD for 3 days	Rehydration (oral/IV) essential Antibiotics are adjuvant therapy
19	Bacterial dysentery	Ceftriaxone 2 gm IV OD for 5 days	Azithromycin 1 gm od x 3d	
20	Amoebic dysentery	Metronidazole 500 to 750 mg IV q8h for 7-10 days	Tinidazole 2 gm PO OD for 3 days	Add diloxanide furoate 500 mg tds for 10d
21	Febrile Neutropenia	Ceftazidime (150 mg/kg/day in 3div doses) + Amikacin (15-20mg/kg/day in 2 or 3 div doses)	Piperacillin + Tazobactam (200-300 mg/kg/day IV in 3-4 div doses)+ Vancomycin (40 mg/kg/day IV in 4 divided doses)	if fever persists or ANC remains <200 parenteral therapy should be continued with 2nd line antibiotics

2. Pediatrics

Sr. No.	Clinical condition	Empiric antibiotics/1 st line antibiotics	Alternative antibiotics	Remarks/Comments
1	Urinary Tract Infection	<p>Parenteral (for pyelonephritis) Inj. Amikacin 15mg/kg/d q24h X 10-14 days OR Inj. Ceftriaxone 75mg/kg/day in divided doses 10-14 days Oral for Uncomplicated UTI</p> <p>Amoxyclav (30-50mg of Amoxicillin) for 7-10 days OR Co-trimoxazole (8-10mg/kg/d of TMP component) orally 12 hourly OR Nitrofurantoin 8mg/kg/d orally 6 hourly for 5-7 days</p>	<p>Meropenem 120mg/kg/day 8 hourly Vancomycin 60mg/kg/day 6 hourly for 10-14 days Piperacillin-Tazobactam 300mg/kg/d 8 hourly for 10-14 days Teicoplanin 10mg/kg/day /dose every 12 hours for 3 doses then 10mg/kg/day once daily Ofloxacin 20mg/kg/d 12 hourly</p>	Get urine cultures before antibiotics & modify therapy based on sensitivities
2	Upper Respiratory Tract Infections	<p>Amoxicillin 40mg/kg/d orally 6- 8 hourly for 10 days OR Amoxy-clav (30-50 mg of Amoxicillin) for 7-10 days</p>		
3	Lower respiratory tract infection	<p>Amoxy-clav (30-50 mg of Amoxicillin) for 7-10 days OR Cefotaxime 100mg/kg/d IV 8 hourly for 10- 14 days OR Ceftriaxone 100mg/kg/d IV 12 hourly for 10-14 days</p>	<p>Meropenem 120mg/kg/day 8 hourly Vancomycin 60mg /kg/day 6 hourly for 10-14 days Piperacillin-Tazobactam 300mg/kg/d 8 hourly for 10-14 days</p>	
4	Enteric fever	<p>Ceftriaxone 100mg/kg/d IV 12 hourly for 10-14 days OR Cefixime 20mg/kg/d for 14 days</p>	<p>Ofloxacin 15mg/kg/d 12 hourly for 10-14 days Azithromycin 20mg/kg/d for 7 days</p>	Antibiotic therapy should be continued till one week post-fever defervescence shift to oral cefixime once fever resolves

5	Septicemia / bacteremia	Ampicillin 100-400mg/kg/d IV 6 hourly OR Ceftriaxone 100mg/kg/d IV 12 hourly for 7-10 days OR Cefotaxime 150mg/kg/d IV 6-8 hourly for 10- 14 days + Gentamicin 5-7.5mg/kg/d IM or IV 24 hourly for 7-10 days OR Amikacin 15-20mg/kg/d 24 hourly	Meropenem 120 mg/kg/day 8 hourly Vancomycin 60mg /kg/day 6 hourly Piperacillin-Tazobactam 300mg/kg/d 8 hourly Ofloxacin 20mg/kg/d 12 hourly Teicoplanin 10mg/kg/day /dose every 12 hours for 3 doses then 10mg/kg/day once daily	
6	Pyrexia of unknown origin (PUO)	Ceftriaxone 100mg/kg/d IV 12 hourly for 7-10 days	Piperacillin-Tazobactam 300mg/kg/d 8 hourly	
7	VAP (Ventilator Associated Pneumonia)	Piperacillin-Tazobactam 300mg/kg/d 8 hourly OR Vancomycin 40-60mg /kg/day 6-8 hourly OR Meropenem 120 mg/kg/day 8 hourly		Modify based on culture of lower respiratory tract secretions. Stop antibiotics after 5 days of clinical response
8	Meningitis	Ceftriaxone 100mg/kg/d IV 12 hourly for 10-14 days	Vancomycin 60mg /kg/day 6 hourly for 10-14 days if Staph/ resistant pneumococcal disease suspected.	Discontinue Vancomycin if rapid latex agglutination negative for S. pneumoniae or positive for N. meningitidis, or H. influenza
9	Diarrhoea / Dysentery	Co-trimoxazole (8-10mg/kg/d of TMP component) orally 12 hourly OR Cefixime 8-10 mg/kg/day in divided doses for 5 days Parenteral Ceftriaxone 100mg/kg/d IV 12 hourly for 5-7 days		

10	Infective Endocarditis	Cefotaxime 150mg/kg/d IV 6-8 hourly + Gentamicin 5-7.5mg/kg/d IM or IV 24 hourly	Vancomycin 60mg /kg/day 6 hourly + Gentamicin 5-7.5mg/kg/d IM or IV 24 hourly	
11	Shunt Infection	Vancomycin 60mg /kg/day 6 hourly + Gentamicin 5-7.5mg/kg/d IM or IV 24 hourly		

Clinical condition	Empiric antibiotics/1 st line antibiotics	Alternative antibiotics	Remarks/Comments
EOS including meningitis	Ampicillin 70-100mg/kg/day Gentamicin 5mg/kg/day Duration : 14 days (culture positive sepsis) 21 days (Meningitis)	Piperacillin - Tazobactam 100mg/kg/day Amikacin 15mg/kg/day	Always send Blood for culture and sensitivity testing before starting antibiotics -Modify therapy based on sensitivity -Step antibiotics if blood culture negative in suspected sepsis & baby stable clinically
LOS including meningitis	Piperacillin - Tazobactam Gentamicin 5mg/kg/day Duration - 14 days (culture positive sepsis) 21 days (Meningitis)	Piperacillin - Tazobactam 100mg/kg/day Amikacin 15mg/kg/day	Always send Blood for culture and sensitivity testing before starting antibiotics -Modify therapy based on sensitivity -Step antibiotics if blood culture negative in suspected sepsis & baby stable clinically
Gm Positive	Cloxacillin 50mg/kg/day Gentamicin 5mg/kg/day Duration - 14 days (culture positive sepsis) 21 days (Meningitis)	Meropenem 20mg/kg/dose Vancomycin 10-15 mg/kg/dose	Always send Blood for culture and sensitivity testing before starting antibiotics -Modify therapy based on sensitivity -Step antibiotics if blood culture negative in suspected sepsis & baby stable clinically
Acinetobacter	Meropenem 20mg/kg/dose Gentamicin 5mg/kg/day Duration - 14 days (culture positive sepsis) 21 days (Meningitis)	Vancomycin 10-15 mg/kg/dose Linezolid 10 mg/kg/dose	Always send Blood for culture and sensitivity testing before starting antibiotics -Modify therapy based on sensitivity -Step antibiotics if blood culture negative in suspected sepsis & baby stable clinically

Pan Resistant	Colectin 25000 units/kg/dose Duration - 14 days (culture positive sepsis) 21 days (Meningitis)		Always send Blood for culture and sensitivity testing before starting antibiotics -Modify therapy based on sensitivity -Step antibiotics if blood culture negative in suspected sepsis & baby stable clinically
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MDR organisms (Paediatrics)

Clinical condition	Empiric antibiotics/ 1 st line antibiotics	Alternative antibiotics	Remarks/Comments
MRSA infection	Vancomycin 25-30 mg IV loading followed by 15-20 mg/kg 8-12 Hourly OR Teicoplanin 12 mg/kg x3 doses followed by 6 mg/kg once a day OR Piperacillin – Tazobactam 4.5gm IV 8 hourly	Linezolid 600 mg IV/Oral 12 hourly Daptomycin 6mg/kg IV once a day	MRSA strains may be reported as susceptible to Fluoroquinolones, aminoglycosides, chloramphenicol and doxycycline in-vitro, these drugs are NOT to be used alone or as initial treatment for serious MRSA infections
MDR infections Enterobacteriaceae & non-fermenting GNB	Meropenem 120mg/kg/day divided 8 hourly OR Piperacillin – Tazobactam 4.5gm IV 8 hourly for 7-10 days Ofloxacin 200-400mg orally/IV 12 hourly	Colistin base 2.5 – 5 mg/kg/day I/V every 6 – 12 hourly (1mg= 30000 IU) Polymyxin B 15,000-25,000 units/kg/day divided q12hr; not to exceed 25000 units/kg/day Tigecycline 100mg followed by 50mg every 12 hourly infusion over 30-60 minutes	

3. SURGERY

Sr No	Clinical condition	Empiric antibiotics/ 1 st line antibiotics	Alternative antibiotics	Remarks/Comments
1	UTI	Tab. Nitrofurantoin 100mg 12 hrly OR Tab. Cotrimoxazole DS 12 hrly OR Tab Doxycycline 100 mg 12 hrly OR Inj Amikacin 250 mg IV/IM 12 hrly OR Inj. Gentamicin 5mg/kg IV OD	Inj. Piperacillin with Tazobactam 3.375 IV 6 hourly OR Tab. Ofloxacin 300 mg 12 hourly OR Inj. Imipenam 500 mg IV 6hourly Meropenam 1 gm IV 24 hourly	Can Be Changed According To Urine Culture Sensitivity
2	Skin soft tissue Cellulitis	Tab Cotrimoxazole 12 hrly + Tab Amoxicillin 500 mg Tab Doxycycline 100 mg 12 hrly OR Inj. Clindamycin 600 mg 6 hrly IV	Inj. Vancomycin 15 mg/kg IV 12 hrly	Can Be Changed According To Pus Culture Sensitivity
3	Cutaneous Abscess	Tab Doxycycline 100 mg 12 hrly, Tab Cotrimoxazole DS 12 hrly + Tab Cloxacillin 500 mg 6hrly	Inj. Vancomycin 15 mg/kg IV 12 hrly	Can Be Changed According To Pus Culture Sensitivity
4	Diabetic Foot	Inj. Vancomycin 15 mg/kg IV 12 hrly + Inj. Piperacillin with Tazobactam 3.375 IV 6 hrly + Inj. Metronidazole 500 mg 8 hrly IV		Can Be Changed According To Pus Culture Sensitivity
5	Cholecystitis, cholangitis	Inj. Ceftriaxone 1 gm 12 hrly IV Inj. Piperacillin with Tazobactam 3.375 IV 6 hourly	Severe cases Inj. Imipenam 500 mg IV 6hrly OR Meropenam 1 gm IV 24 hrly + Inj. Metronidazole 500 mg 8 hrly IV	Surgical or endoscopic intervention to be considered if there is biliary obstruction. De-escalate to narrow spectrum agent on receipt of sensitivities.

6	Septicemia/ bacteremia	Inj. Ceftriaxone 1 gm 12 hourly IV + Inj. Metronidazole 500 mg 8 hrly IV Inj. Cefotaxim 500 mg IV 6 hrly Inj. Amoxicillin +Clavulanic acid 1.2 gm BD Tab Doxycycline 100 mg 12 hrly,	Inj. Meropenem 2 gm 8 hrly + Inj Vancomycin 1 gm 12 hrly IV, Inj. Piperacillin with Tazobactam 3.375 IV 6 hrly Inj. Teicoplanin 6 mg/kg 12 hrly IV or IM	
7	SSI (Surgical site infection) G.U.T.	Inj Amoxicillin +Clavulanic acid 1.2 gm BD , Inj. Cefotaxim 500 mg IV 6 hrly Tab Ceftriaxone 1 gm 24 hrly, Inj Piperacillin +Tazobactam 3.375gm every 6 hrly OR 4.5 gm every 8 hrly IV, Tab Doxycycline 100 mg 12 hrly Tab Metronidazole 500 mg 8 hrly IV	Inj. Meropenem 2 gm 8 hrly + Inj Vancomycin 1 gm 12 hrly IV Inj. Piperacillin with Tazobactam 3.375 IV 6 hrly Inj. Teicoplanin 6 mg/kg 12 hrly IV or IM	
8	Wound infection	Inj. Amoxicillin +Clavulanic acid 1.2 gm BD Tab Ceftriaxone 1 gm 24 hrly	Inj. Meropenem 2 gm 8 hrly + Inj Vancomycin 1 gm 12 hrly IV Inj.Piperacillin with Tazobactam 3.375 iv 6 hrly Inj. Teicoplanin 6 mg/kg 12 hrly IV or IM	
9	Acute prostatitis Chronic bacterial prostatitis	Piperacillin-tazobactam 4.5 gm IV q 6h or Cefoperazone-sulbactam 3 gm IV q 12h or Ertapenem 1 gm IV OD or Ciprofloxacin 750 mg po bid	TMP/SMX DS PO q12h	Obtain urine and blood cultures before antibiotics & switch to narrow spectrum agent based on sensitivities. Treat for 4 weeks. Therapy based on urine and prostatic massage cultures obtained before antibiotics. Treat for 4-6 weeks

4 . OBSTETRICS AND GYNAECOLOGY

Sr no	Clinical condition	Empiric antibiotics/ 1 st line antibiotics	Alternative antibiotics	Remarks/Comments
1	Vaginal delivery: in the following situations: <ul style="list-style-type: none"> • Pr term labour (<37 wks) • Pr olonged rupture of membranes (>18hrs) • F ever during labour or chorioamnionitis • Hi story of previous baby with GBS infection • Bl adder or kidney infection due to GBS 	Inj. Cefotaxime 2gm IV followed by 1 gm IV 4 to 6 hourly till delivery	Inj. Cefazolin 2 gm iv followed by 1 gm 8 hourly till delivery. If allergic then Vancomycin 1 gm iv till delivery	Not recommend routinely for normal vaginal delivery. Delivery is considered akin to drainage of an abscess as the fetus and placenta is removed which are the nidus of infection
2	3rd or 4th degree Perineal tear	Single dose Cefotaxime OR Ceftriaxone 1 gm IV	Single dose : Inj. Cefazoline 1 gm IV + Inj. Metronidazole 500 mg IV OR Single dose of Inj. Cefuroxime 1.5gm+ Inj. Metronidazole 500 mg IV OR Inj. Amox+ Clavulanic acid 1.2 gm IV If allergic, single dose IV clindamycin 600-900mg	Prophylaxis is considered to prevent adverse outcomes arising from infection e.g. fistulas
3	Preterm pre-labour rupture of membranes	IV Cefotaxime 2gm followed by 1gm 4-6 hourly for 48 hours followed by cefixime 200mg 8 hourly for 5 days + oral Erythromycin 333mg 8 hourly for 7 days	If Erythromycin 333 mg not available, use Erythromycin stearate 250 mg 6 hourly for 7days	

4	Caesarean delivery	Single dose Inj. Cefotaxime 2 gm IV Dose is 3 gm if patient is >100kg	If allergic, single dose clindamycin 600-900mg IV + Gentamicin 1.5 mg/kg IV	Puerperal endometritis is polymicrobial, (aerobic-anaerobic). These organisms are part of vaginal flora and are introduced into the upper genital tract coincident with vaginal examinations during labor and/or instrumentation during surgery Tita et al showed the addition of 500mg azithromycin to cefazolin for (in labour or with membranes ruptured) reduced Endometritis & wound infection significantly (6.1% vs. 12%, p<0.001), endometritis (3.8% vs 6.1%, p=0.02) wound infection (2.4% vs. 6.6% , p<0.001)
5	Rescue cervical encerclage	Inj. Ampicillin 2 gm single dose		To prevent ascending infection from vaginal flora to exposed membranes
6	Puerperal sepsis/ Septic abortion/ chorioamnionitis	Inj. Piperacillin + Tazobactam 4.5 gm IV 8 hourly for 7 - 14 days	Clindamycin 600-900mg IV 8 hourly + Gentamicin 60 mg IV 8 hourly + Metronidazole 500 mg IV 8 hourly OR Ampicillin – Sulbactam 3gm IV 6 hourly	
7	Hysterectomy (AH,VH, Laparoscopic) and surgeries for pelvic organ prolapsed and/or stress urinary incontinence	Inj. Cefotaxime 2gm IV single dose Dose is 3 gm if patient is >100kg	Cefuroxime 1.5gm IV single dose OR if allergic to cephalosporin, Clindamycin 600 -900 mg IV + Gentamicin 1.5 mg/kg IV	
8	Laparoscopy (uterus and/or vagina not entered/)	Inj. Cefazolin 1 gm single dose IV	Cefuroxime 1.5 gm single dose IV If allergic use	

	Hysteroscopy/ ectopic pregnancy		clindamycin 600 mg	
9	Abortions (medical and surgical)	Tab. Azithromycin 1gm orally+ Tab Metronidazole 800 mg orally at time of abortion	Doxycycline 100mg orally twice daily for 7 days, starting on day of abortion + Metronidazole 800mg orally at time of abortion	No prophylaxis for missed/ incomplete abortion
10	Postoperative Surgical site infection Obstetrics	Inj Amoxicillin + Clavulanic acid 1.2 gm BD + Inj Metronidazole 500mg TDS OR Gentamicin 5mg/kg IV OD + Inj. Metronidazole 500 mg 8 hrly.		
11	HSG	Tab Doxycycline 100 mg orally before procedure		Doxycycline continued for twice daily for 5 days if there is history of PID or fallopian tubes are dilated at procedure
12	Pelvic Inflammatory disease (mild to moderate)	NACO: Tab. Cefixime 400mg orally stat + Tab. Metronidazole 400mg BD for 14 days + Cap. Doxycycline 100mg BD for 14 days	CDC: Levofloxacin 500mg OD x 14 days OR Ofloxacin 400 mg OD for 14 days with or without Metronidazole 500 mg BD for 14 days OR Ceftriaxone 250 mg IM single dose + Doxycycline 100mg orally BD for 14 days with or without Metronidazole 500mg BD for 14 days	
13	Pelvic Inflammatory disease (severe	Inj Cefotetan 2 gm IV BD +	Cefoxitin 2gm IV 6 hourly + Doxycycline	An attempt should be made to obtain cultures and deescalate based on

) eg tubo-ovarian abscess, pelvic abscess,	Doxycycline 100mg orally or IV BD	100mg orally or IV 12 hourly OR Clindamycin 900mg IV 8 hourly + Gentamicin loading dose 2gm/kg IVor IM followed by maintaince dose 1.5 mg/kg every 8 hours. Single daily dosing (3-5mg/kg) can be substituted	that. Duration is two weeks, but can be extended depending upon clinical situation. Antibiotics may be altered after obtaining culture reports of pus/ or blood
14	Vaginal candidiasis	Tab Fluconazole 150 mg orally single dose OR local Clotrimazole 500mg vaginal tablet once only	Miconazole, Nystatin, vaginal tablets/creams	Treat for 7 days in pregnancy, diabetes, Recurrent infections: 150 mg Fluconazole on day 1,4,7 then weekly for 6 months
15	Vaginal trichomoniasis	Tab Secnidazole 2gm oral single dose OR Tab Tinidazole 500mg orally BD for 5 days OR Tab.Metronidazole 400 mg BD for 7 days		Alcohol avoided during treatment and 24 hours after metronidazole or 72 hours after completion of tinidazole to reduce possibility of disulfiram-like reaction. Partner treatment essential
16	Bacterial vaginosis	Metronidazole 400 mg BD for 7 days OR Metronidazole gel 0.75% one applicator(5g) intra-vaginal for 5 days OR Clindamycin cream 2% one applicator(5 gm) intra-vaginal for 7 days	Secnidazole 2gm orally OD for one day OR Tinidazole 2 gm orally OD for 2 days OR Tinidazole 1 gm orally OD for 5 days OR Clindamycin Orally 300 mg BD for 7 days OR Clindamycin ovules 100mg intravaginally OD HS for 3 days.	Refrain from sexual activity OR use condoms during the treatment. Clindamycin cream is oil-based and might weaken latex condoms

17	UTI Uncomplicated	Tab Nitrofurantoin 50-100 mg for 4 times Tab Ciprofloxacin 500 mg BD for 14 days OR Tab Norfloxacin 400 mg BD for 14 days		
18	Pyelonephritis	Piperacillin with Tazobactam 3.375 IV 6 hourly for 14 days		
19	Asymptomatic bacteruria in pregnancy	Tab Nitrofurantoin 50-100 mg for 4 times		
20	Cystitis	Tab Nitrofurantoin 50-100 mg for 4 times Tab Ciprofloxacin 500 mg BD for 14 days OR Tab Norfloxacin 400 mg BD for 14 days		

9. OPHTHALMOLOGY

Sr no	Clinical condition	Empiric antibiotics/ 1 st line antibiotics	Alternative antibiotics	Remarks/Comments
1	Blepharitis Anterior Posterior	e/d Chloramphenicol BD for 7 days Tab Azithromycin 500 mg for 3 days Topical e/d Tobramycin 0.5% OR e/d Gentamicin 0.3% Refractory cases Tab Doxycycline 100 mg BD for 1 week then daily for 6 to 12 weeks		Lid margin care with baby shampoo and warm compress 24 hrly. Artificial tears if associated with dry eye
2	External Hordeolum (Stye)	Tab Levofloxacin 500 mg/day for 5 days. Tab. Cloxacillin 250-500 mg QID		Hot fomentation Pus evacuation by epilation.

		Tab Cephalixin 500 mg QID		
3	Bacterial conjunctivitis	e/d Gatifloxacin 0.3% e/d Levofloxacin 0.5% e/d Moxifloxacin 0.5% 2 hrly for 1 st 2 days then 4-8 hourly upto 7 days		
4	Acute bacterial keratitis	e/d Moxifloxacin 0.5% 1 hourly for 48 hrs then as per response	e/d Gatifloxacin 0.3% 1 drop 1 hourly for 48 hrs then reduce as per response	Moxifloxacin t/t may fail against MRSA
5	Acute bacterial infection complicated (pseudomonas)	e/d Tobramycin 0.5% OR Gentamicin 0.3 % e/d + e/d Piperacillin Or Ticarcillin (6-12 mg/ml) 15-60 min around clock 24-72 hr , then slowly reduce frequency	e/d Ciprofloxacin 0.3% or e/d Levofloxacin 0.5%	
6	Orbital Cellulitis	Inj.Cloxacillin 2gm IV 4 hrly + Inj. Ceftriaxone 2 gm IV 24 hrly + Inj. Metronidazole 1 gm IV 12hrly	If allergic to Penicillin then Vancomycin 1 gm IV 12 hrly + Levofloxacin 750 mg IV od + Metronidazole 1 gm 24 hrly	If MRSA is suspected substitute Cloxacillin with Vancomycin
7	Endophthalmitis Bacterial	Immediate ophthalmology consultation. Immediate vitrectomy + intravitreal antibiotics (Inj vancomycin + Inj Ceftazidime) Intravitreal antibiotics . Inj. Vancomycin+ Inj Ceftazidine + systemic antibiotics Inj. Meropenam 1 gm IV 8 hrly OR Inj. Ceftriaxone 2gm IV 24 hrly + Inj. Vancomycin 1 gm IV12 hrly	Adjuvant systemic (doughtful value in post cataract surgery endophthalmitis) Inj Vancomycin + Inj Meropenam	

8	Cataract Sx	Tab. Ciplox 500mg BD for 5 days e/d Ciprofloxacin 0.3% OR e/d Moxifloxacin 0.5% QID		
9	Acute Dacryocystitis	Tab. Amoxicillin and Clavulanic acid 625 mg 12 hourly e/d Moxifloxacin 0.5% 8 hourly		

ANTI - VIRAL AND ANTI - FUNGAL

Sr no	Clinical condition	Empiric antibiotics/ 1 st line antibiotics	Alternative antibiotics	Remarks/Comments
1	Herpes simplex keratitis	Trifluridine ophthalmic solution 1 drop 2 hour, upto 9 times/ day until re – epithelized then 1 drop 4 hourly upto 5 times / day for duration of 21 days	Ganciclovir 0.15% ophthalmic gel for acute herpetic keratitis	Fluorescein staining shows topocal dendritic figures 30 – 50 % re-cure within 2 years
2	Varicella Zoster ophthalmicus	Famciclovir 500 mg BD Or TID OR Valacyclovir 1 gm oral TID for 10 days	Acyclovir 800 mg 5 times/ day for 10 days	
3	Fungal keratitis	Natamycin 5% 1 drop 1- 2 hrly for several days , then 3 – 4 hourly for several days depending on response	Amphotericin B (0.15%) 1 drop , 1- 2 hourly for several days depending on the response	Empirical therapy is not recommended
4	Endophthalmitis Mycotic (Fungal)	Intravitreal Amphotericin B 0.005- 0.01 mg in 0.1 ml Systemic therapy : Amphotericin B 0.7 – 1mg / kg + Flucytosine 25 mg/kg QID	Liposomal Amphotericin B 3- 5 mg /kg OR Voriconazole	Duration of treatment 4-6 weeks or longer depending upon clinical response. Patients with Chorioretinitis and ocular involvement other than endophthalmitis often response to systemically administered antifungal.

10. ENT

Sr no	Clinical condition	Empiric antibiotics/ 1 st line antibiotics	Alternative antibiotics	Remarks/Comments
1	Acute otitis media	Amoxicillin + Clavulanic Acid (Amoxicillin 45mg/kg/day TDS/50-60mg/kg/day in two divided doses) for 7-10 days Cotrimoxazole 8mg/kg/d 12 hourly		
2	Acute mastoiditis	Cefotaxime 1-2 g i.m./i.v. 6-12 hourly, children 50-100mg/kg/day. Inj.Ceftriaxone 75 mg/kg/day OD		
3	Acute epiglottitis	Cefotaxime 50 mg/kg IV 8 hourly Ceftriaxone 50 mg/kg IV 24 hourly	Levofloxacin 10 mg/kg IV 24 hourly	
4	Acute tonsillitis/ Pharyngitis	Penicillin V oral x10 days OR Benzathine Penicillin 1.2 MU IM x 1 dose OR Cefdinir or cefepodoxime x 5 days	Penicillin allergic, Clindamycin 300-450 mg orally 6-8 hourly x 5 days. Azithromycin clarithromycin are alternatives.	
5	Head and neck space infections	Clindamycin 600 mg IV q8h or Amox-clav 1.2 gm IV/PO q8h	Piperacillin-tazobactam 4.5 gm IV q 6h	Duration: At least 1 week
6	Acute sinusitis	Amox-clav 1.2 gm IV/PO q8hfor 7 days	Piperacillin-tazobactam 4.5 gm IV q 6h	Exclude fungi (Aspergillus, Mucor)
7	Acute bronchitis (Viral)			Antibiotics not required
8	Ludwig's angina Vincent's Angina	Clindamycin 600mg IV 8 hourly or Amoxicillin clavulanate 1.2 gm IV	Piperacillin tazobactam 4.5 gm IV 6 hourly	10-14 days and then can be prolonged based on response.

11. SKIN

Sr no	Clinical condition	Empiric antibiotics/ 1 st line antibiotics	Alternative antibiotics	Remarks/Comments
1	Cellulitis	Amoxicillin-Clavulanate 1.2gm IV TDS/625 mg oral TDS OR Ceftriaxone 2gm IV OD	Clindamycin 600-900mg IV TDS	Treat for 5-7 days.
2	Furunculosis	Amoxicillin-Clavulanate 1.2gm IV/Oral 625 TDS OR Ceftriaxone 2gm IV OD Duration – 5-7 days	Clindamycin 600-900mg IV TDS	Get pus cultures before starting antibiotics
3	Necrotizing fasciitis	Piperacillin-Tazobactam 4.5gm IV 6hourly AND Clindamycin 600-900mg IV 8 hourly Duration depends on the progress	Imipenem 1g IV 8hourly OR Meropenem 1gm IV 8hourly AND Clindamycin 600-900mg IV TDS	Early surgical intervention crucial
4	Impetigo and skin soft-tissue infections	Clindamycin 300-400 mg qid PO	Amoxicillin-clavulanate 875/125 mg bid po	Local: Mupirocin ointment Apply to lesions bid

12. RESPIRATORY MEDICINE

Sr no	Clinical condition	Empiric antibiotics/ 1 st line antibiotics	Alternative antibiotics	Remarks/Comments
1	Lower respiratory tract infection	Amoxicillin -clavulanate 1.2 g IV TDS OR Ceftriaxone 2g IV OD Cotrimoxazole 960mg 12 hourly Azithromycin 500 mg once daily orally/ IV for 3-5 days Doxycycline 100mg 12 hourly orally Gentamicin 7.5mg/kg/day OD i.m or i.v for 10 days Amikacin 15mg/Kg/day q 8-12 hours IV	Piperacillin – Tazobactam 4.5gm IV 8 hourly for 7-10 days. Imipenem 1g IV 8hourly OR Meropenem 1g IV 8hourly Vancomycin 15mg/kg IV 12 hourly Teicoplanin 6-30 mg/kg/day IV 3 doses 12 hourly then 24h	Amikacin max doses 1.5mg/Kg If atypical pneumonia suspected, Doxycycline 100mg bd

2	VAP (Ventilator Associated Pneumonia)	Ceftriaxone 2g IV once daily for 5-7 days Amikacin 15mg/Kg/day q 8-12 hours IV Gentamicin 7.5mg/kg/day OD i.m or i.v for 10 days Piperacillin – Tazobactam 4.5gm IV 8 hourly for 7-10 days Imipenem 1g IV 8hourly or Meropenem 1g IV 8hourly Vancomycin 15mg/kg IV 12 hourly		Modify based on culture of lower respiratory tract secretions. Stop antibiotics after 5 days of clinical response
3	Lung abscess	Piperacillin-Tazobactam 4.5gm IV 6 hourly	ADD Clindamycin 600-900mg IV 8 hourly	3-4 weeks treatment required
4	Acute bacterial exacerbation of COPD	Amoxicillin-clavulanate 1gm oral BD for 7 days	Azithromycin 500 mg oral OD x 3 days	

13. MDR organisms

Sr no	Clinical condition	Empiric antibiotics/ 1 st line antibiotics	Alternative antibiotics	Remarks/Comments
1	MRSA infection	Vancomycin 25-30 mg IV loading followed by 15-20 mg/kg 8-12 Hourly Teicoplanin 12 mg/kg x3 doses followed by 6 mg/kg once a day Piperacillin – Tazobactam 4.5gm IV 8 hourly	Linezolid 600 mg IV/Oral 12 hourly Daptomycin 6mg/kg IV once a day	MRSA strains may be reported as susceptible to Fluoroquinolones, aminoglycosides, chloramphenicol and doxycycline in-vitro, these drugs are NOT to be used alone or as initial treatment for serious MRSA infections
2	MDR infections Enterobacteriaceae & non-fermenting GNB	Imipenem 1g IV 8hourly or Meropenem 1g IV 8hourly Piperacillin – Tazobactam 4.5gm IV 8 hourly for 7-10 days Ofloxacin 200-400mg orally/IV 12 hourly	Colistin base 2.5– 5mg/kg /day I/V every 6 – 12 hourly (1mg= 30000 IU) Polymyxin B 15,000-25,000 units/kg/day divided q12hr; not to exceed 25,000 units/kg/day Tigecycline 100mg followed by 50mg every 12 hourly infusion over 30-60 minutes	

ANTIMICROBIAL AGENTS THAT REQUIRE DOSAGE ADJUSTMENT OR ARE CONTRAINDICATED IN PATIENTS WITH RENAL OR HEPATIC IMPAIRMENT

Dosage Adjustment Needed in Renal Impairment	Acyclovir, amantadine, aminoglycosides, aztreonam, carbapenems, cephalosporins (except ceftriaxone), clarithromycin, colistin, cycloserine, daptomycin, didanosine, emtricitabine, ethambutol, ethionamide, famciclovir, fluconazole, flucytosine, foscarnet, ganciclovir, lamivudine, penicillins (except nafcillin & dicloxacillin), pyrazinamide, quinolones (except moxifloxacin), rimantadine, stavudine, telavancin, telbivudine, telithromycin, tenofovir, terbinafine, trimethoprim-sulfamethoxazole, valacyclovir, vancomycin, zidovudine
Contraindicated in Renal Impairment	Cidofovir, methenamine, nalidixic acid, nitrofurantoin, sulfonamides (long-acting), tetracyclines (except doxycycline & possibly minocycline)
Dosage Adjustment Needed in Hepatic Impairment	Amprenavir, atazanavir, chloramphenicol, clindamycin, erythromycin, fosamprenavir, indinavir, metronidazole, rimantadine, tigecycline, isoniazid, rifampin
Contraindicated in Hepatic Impairment	Erythromycin estolate, tetracyclines, pyrazinamide, nalidixic acid, talampicillin, pefloxacin

CHOICE OF DRUGS FOR COMMON PROBLEMS DURING PREGNANCY

Drug class	Unsafe/ safety uncertain	Safer alternative
Antibacterials (systemic bacterial infections)	Cotrimoxazole, Fluoroquinolones, Tetracycline, Doxycycline, Chloramphenicol, Gentamicin, Streptomycin, Kanamycin, Tobramycin, Clarithromycin, Azithromycin, Clindamycin, Vancomycin, Nitrofurantoin	Penicillin G, Ampicillin, Amoxicillin-clavulanate, Cloxacillin, Piperacillin, Cephalosporins, Erythromycin
Antitubercular	Pyrazinamide, Streptomycin	Isoniazid, Rifampicin, Ethambutol
Antiamoebic	Metronidazole, Tinidazole, Quiniodochlor	Diloxanide furoate, Paromomycin
Antimalarial	Artemether, Artesunate, Primaquine	Chloroquine, Mefloquine, Proguanil, Quinine (only in 1st trimester), Pyrimethamine + Sulfadoxine (only single dose)
Anthelmintic	Albendazole, Mebendazole, Ivermectin, Pyrantel pamoate, Diethylcarbamazine	Piperazine, Niclosamide, Praziquantel
Antifungal (superficial and deep mycosis)	Amphotericin B, Fluconazole, Itraconazole, Ketoconazole, Griseofulvin, Terbinafine	Clotrimazole, Nystatin, Tolnaftate Topical
Antiretroviral (HIV/AIDS)	Didanosine, Abacavir, Indinavir, Ritonavir, Efavirenz	Zidovudine, Lamivudine, Nevirapine, Nelfinavir, Saquinavir
Antiviral (other than HIV)	Acyclovir, Ganciclovir, Foscarnet, Amantadine, Vidarabine, α -interferon	

ANTIMICROBIAL AGENTS THAT ARE SAFE OR ARE CONTRAINDICATED IN BREASTFEEDING WOMEN

Safe in ordinary doses	Albendazole, Antifungal drugs (topical), Cephalosporins, Cloxacillin, Erythromycin, Ethambutol, Gentamicin, Mebendazole, Niclosamide, Piperacillin, Piperazine, Praziquantel, Pyrantel, Pyrazinamide
Used with special precaution	Acyclovir, Aminoglycosides, Ampicillin/Amoxicillin, Chloroquine, Clindamycin, Clofazimine, Cotrimoxazole, Dapsone, Isoniazid, Mefloquine, Metronidazole, Nalidixic acid, Nitrofurantoin, Penicillins, Pyrimethamine-sulfadoxine, Quinidine, Rifampin, Streptomycin, Sulfonamides, Tinidazole, Vancomycin
Drugs contraindicated	Azithromycin, Chloramphenicol, Ciprofloxacin, Cyclosporine, Fluconazole, Itraconazole, Ketoconazole, Methotrexate, Norfloxacin, Tetracyclines

GERIATRIC PATIENTS

Drugs to be Avoided	Reasons	Safer alternatives
Antibiotics Penicillins Cephalosporins Fluoroquinolones Nitrofurantoin	Because of the decline in renal functions in elderly, half-life of these antibiotics is prolonged. Elderly are very sensitive to peripheral neuritis and pulmonary reaction caused by nitrofurantoin. Gatifloxacin may cause episodes of hypo- as well as hyperglycaemia (caution- diabetes)	Use of ceftriaxone cefoperazone, which are excreted through bile, could be alternatives. Some trials indicate that half life of tobramycin is not prolonged in elderly. This could be other alternative. Otherwise dose adjustment of these drugs is needed.

DRUG INTERACTIONS IN DIABETES MELLITUS

Sulfonamides	Enhance sulfonylureas action (may precipitate hypoglycaemia) by displacing protein bound drug
Ketoconazole,	Enhance sulfonylureas & pioglitazones action (may precipitate hypoglycaemia) by inhibiting metabolism
Sulfonamides,	Enhance sulfonylurea action (may precipitate hypoglycaemia) by inhibiting metabolism
Chloramphenicol	Enhance sulfonylurea action (may precipitate hypoglycaemia) by inhibiting metabolism
Rifampicin	Induce metabolism, decrease action of sulfonylurea & pioglitazones (vitiates diabetes control)

EMPIRIC ANTIMICROBIAL THERAPY BASED ON MICROBIOLOGICAL ETIOLOGY

Suspected or Proven Disease or Pathogen	Drugs of First Choice	Alternative Drugs
Gram-negative cocci (aerobic)		
Moraxella (Branhamella) catarrhalis	TMP-SMZ, cephalosporin (second- or third-generation)	Quinolone, 3 macrolide ⁴
Neisseria gonorrhoeae	Ceftriaxone, cefixime	Spectinomycin, azithromycin
Neisseria meningitidis	Penicillin G	Chloramphenicol, ceftriaxone, cefotaxime
Gram-negative rods (aerobic)		
E coli, Klebsiella, Proteus	Cephalosporin (first- or second generation), TMP-SMZ	Quinolone, aminoglycoside
Enterobacter, Citrobacter, Serratia	TMP-SMZ, quinolone, Carbapenem	Antipseudomonal penicillin, aminoglycoside, cefepime
Shigella	Quinolone	TMP-SMZ, ampicillin, azithromycin, ceftriaxone
Salmonella	Quinolone, ceftriaxone	Chloramphenicol, ampicillin, TMP-SMZ
Campylobacter jejuni	Erythromycin or azithromycin	Tetracycline, quinolone
Brucella species	Doxycycline + rifampin or Aminoglycoside	Chloramphenicol + aminoglycoside or TMP-SMZ
Helicobacter pylori	Proton pump inhibitor + amoxicillin + clarithromycin	Bismuth + metronidazole + tetracycline + proton pump Inhibitor
Vibrio species	Tetracycline	Quinolone, TMP-SMZ
Pseudomonas aeruginosa	Antipseudomonal penicillin ± Aminoglycoside	Antipseudomonal penicillin ± quinolone, cefepime, ceftazidime, antipseudomonal carbapenem, or aztreonam ± aminoglycoside
Burkholderia cepacia (formerly Pseudomonas cepacia)	TMP-SMZ	Ceftazidime, chloramphenicol
Stenotrophomonas maltophilia (formerly Xanthomonas maltophilia)	TMP-SMZ	Minocycline, ticarcillin-clavulanate, tigecycline, ceftazidime, quinolone
Legionella species	Azithromycin or quinolone	Clarithromycin, erythromycin
Gram-positive cocci (aerobic)		
Streptococcus pneumoniae	Penicillin	Doxycycline, ceftriaxone, antipneumococcal quinolone, macrolide, linezolid
Streptococcus pyogenes (group A)	Penicillin, clindamycin	Erythromycin, cephalosporin (first-generation)
Streptococcus agalactiae (group B)	Penicillin (± aminoglycoside)	Vancomycin
Viridans streptococci	Penicillin	Cephalosporin (first- or third-generation), vancomycin

Staphylococcus aureus		
B-Lactamase negative	Penicillin	Cephalosporin (first-generation), vancomycin
B-Lactamase positive	Penicillinase-resistant penicillin	As above
Methicillin-resistant	Vancomycin	TMP-SMZ, minocycline, linezolid, daptomycin, tigecycline
Enterococcus species 10	Penicillin ± aminoglycoside	Vancomycin ± aminoglycoside
Gram-positive rods (aerobic)		
Bacillus species (non-anthraxis)	Vancomycin	Imipenem, quinolone, clindamycin
Listeria species	Ampicillin (± aminoglycoside)	TMP-SMZ
Nocardia species	Sulfadiazine, TMP-SMZ	Minocycline, imipenem, amikacin, linezolid
Anaerobic bacteria		
Gram-positive (clostridia, Peptococcus, Actinomyces, Peptostreptococcus)	Penicillin, clindamycin	Vancomycin, carbapenem, chloramphenicol
Clostridium difficile	Metronidazole	Vancomycin, bacitracin
Bacteroides fragilis	Metronidazole	Chloramphenicol, carbapenem, β -lactam- β -lactamaseinhibitor combinations, clindamycin
Fusobacterium, Prevotella, Porphyromonas	Metronidazole, lindamycin, penicillin	As for B fragilis
Mycobacteria		
Mycobacterium tuberculosis	Isoniazid + rifampin + ethambutol + pyrazinamide	Streptomycin, moxifloxacin, amikacin, ethionamide, cycloserine, PAS, linezolid
Mycobacterium leprae		
Multibacillary	Dapsone + rifampin + clofazimine	
Paucibacillary	Dapsone + rifampin	
Mycoplasma pneumoniae	Tetracycline, erythromycin	Azithromycin, clarithromycin, quinolone
Chlamydia		
C trachomatis	Tetracycline, azithromycin	Clindamycin, ofloxacin
C pneumoniae	Tetracycline, erythromycin	Clarithromycin, azithromycin
C psittaci	Tetracycline	Chloramphenicol
Spirochetes		
Borrelia recurrentis	Doxycycline	Erythromycin, chloramphenicol, penicillin
Borrelia burgdorferi		
Early	Doxycycline, amoxicillin	Cefuroxime axetil, penicillin
Late	Ceftriaxone	
Leptospira species	Penicillin	Tetracycline
Treponema species	Penicillin	Tetracycline, azithromycin, ceftriaxone
Fungi		
Aspergillus species	Voriconazole	Amphotericin B, itraconazole, caspofungin
Blastomyces species	Amphotericin B	Itraconazole, fluconazole

Candida species	Amphotericin B, echinocandin	Fluconazole, itraconazole, voriconazole
Cryptococcus	Amphotericin B ± flucytosine (5-FC)	Fluconazole, voriconazole
Coccidioides immitis	Amphotericin B	Fluconazole, itraconazole, voriconazole, osaconazole
Histoplasma capsulatum	Amphotericin B	Itraconazole
Mucoraceae (Rhizopus, Absidia)	Amphotericin B	Posaconazole
Sporothrix schenckii	Amphotericin B	Itraconazole

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Department Of Surgery Policy for surgical Prophylaxis

Surgery	Prophylactic antibiotic with dose	Time when Prophylactic anti antibiotic given 130 min/60 min before	Recomm ended redosing interval hours	Total Duration (>24 HRS)
Cardiac	Inj cefazolin 1 gm	60 min before	12 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Bariatric, pancreatico-	Inj piperacillin +tazobactam 4.5 gm Inj metro 100cc	60min before and to be repeated intraoperatively if surgery duration exceeds 6 hrs	8 Hourly 8 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Duodenectomy	Inj piperacillin +tazobactam 4.5 gm Inj metro 100cc	60min before and to be repeated intraoperatively if surgery duration exceeds 6 hrs	8 Hourly 8 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Biliary tract	Inj cefazolin 1 gm or infected case- Inj piperacillin +tazobactam	60min before	8 Hourly 12 Hourly 8 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.

	4.5 gm Inj metro 100cc			
Laparoscopic Procedure Elective, low-risk	Inj cefazolin 1 gm	60min before	12 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Elective high risk	Inj. Monocef 1g Inj. Metro 100cc	60min before	12 Hourly 8 Hourly	3doses/3 days/7 days depending on the preoperative status of patient.
Appendectomy	Inj cefazolin 1 gm Inj. Metro 100cc	60min before	12 Hourly 8 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Small intestine Nonobstructed	Inj cefazolin 1 gm Inj. Metro 100cc Inj piperacillin +tazobactam 4.5 gm metro 100cc Inj cefazolin 1 gm	60min before	12 Hourly 8 Hourly 12 Hourly 8 Hourly 12 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Obstructed	Inj cefazolin 1 gm Inj. Metro 100cc Inj piperacillin +tazobactam 4.5 gm metro 100cc Inj cefazolin 1 gm	60min before	12 Hourly 8 Hourly 12 Hourly 8 Hourly 12 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Hemia repair	Inj cefazolin 1 gm Inj. Metro 100cc Inj piperacillin +tazobactam 4.5 gm metro 100cc Inj cefazolin 1 gm	60min before	12 Hourly 8 Hourly 12 Hourly 8 Hourly 12 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Colorectal	Inj cefazolin 1 gm or infected case- Inj piperacillin +tazobactam 4.5 gm Inj metro 100cc	60min before	8 Hourly 12 Hourly 8 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Head and neck	Inj. Cefazolin 1g	60min before	12 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.

Skin and soft tissue infections	Inj. Clindamycin 600mg	60min before	12 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Minor ot procedures	Inj cefazolin 1 gm or Inj. Clindamycin 600mg	60 min before		1 Dose only
Urological procedures	Inj. Cefazolin 1g Inj amikacin 500 mg	60 min before	12 Hourly 12 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.
Breast Procedures	Inj cefazolin 1 gm	60 min before	12 Hourly	3 doses/3 days/7 days depending on the preoperative status of patient.

Department Of OBGY

Policy for surgical Prophylaxis

Surgery	Prophylactic antibiotic with dose	Time when Prophylactic antibiotics given (30 min/60 min before)	Recommended redosing interval hours	Total Duration (>24 Hrs)
Caesarian section (Elective)	Inj. CefaTaxime 1 gm i.v.	30 Min. before	12 Hourly	48 Hrs
Hysterectomy	Inj. CefaTaxime 1 gm i.v.	30 Min. before	12 Hourly	48 Hrs
Vaginal repair	Inj. CefaTaxime 1 gm i.v.	30 Min. before	12 Hourly	48 Hrs

Department Of Orthopaedic

Policy for surgical Prophylaxis

Surgery	Prophylactic antibiotic with dose	Time when Prophylactic antibiotic given [30 min / 60 min before]	Recommended redosing interval hours	Total Duration [>24 Hrs]
Implantation of internal fixation devices & Arthroscopy	Inj. Cefuroxime 1.5 gm	30 min	12 hrly	48 hrs Post op
	Inj. Amikacin 750 mg OD	30 min	24 hrly	48 hrs Post op
Total Joint Replacement	Inj. Cefuroxime 1.5 gm	30 min	12 hrly	48 hrs Post op
	Inj. Teicoplanin 400 mg	30 min	Single shot	—
	Inj. Amikacin 750 mg OD	30 min	24 hrly	48 hrs Post op
Compound Fracture	Inj. Cefuroxime 1.5 gm	Since Admission	12 hrly	> 24 hrs
	Inj. Amikacin 750 mg OD	Since Admission	24 hrly	> 24 hrs
	(+/-) Inj. Metronidazole 100 ml	Since Admission	8 hrly	> 24 hrs
Spine	Inj. Cefuroxime 1.5 gm	30 Min before Surgery	12 hrly	3 days
	Inj. Amikacin 750 mg OD	Not Given		

Department Of Ophthalmology

Policy for surgical Prophylaxis

Surgery	Prophylactic antibiotic with dose	Time when Prophylactic anti antibiotic given 130 min/60 min before	Recommended redosing interval hours	Total Duration (>24 HRS)
Ophthalmic Surgery	Orally Ciprofloxacin 500mg BD	24 hours before surgery	12 HOURLY	Oral medicine for 5 days.
	Topically Moxifloxacin 0.5% eye drop Qid	24 hours before surgery	Topically Moxifloxacin 0.5%Qid for 8 days	Topical medicine for 8 days.
	Intracameral Moxifloxacin 0.5%	At the time of surgery one dose	—	—
	Antiseptic providone Iodine 5%	One drop prior to surgery	—	—

Department Of ENT

Policy for surgical Prophylaxis

Surgery	Prophylactic antibiotic with dose	Time when prophylactic antibiotic to be given	Recommended redosing interval hours	Total duration (more than 24 hours)
Head and Neck Surgery	Inj Augmentin (AMOX+ Clav) 1.2 gm	One hour before surgery	Twelve hours	48 hours followed by oral antibiotics for 5 days
Thyroidectomy	Inj Augmentin (AMOX+ Clav) 1.2 gm	One hour before surgery	Twelve hours	48 hours followed by oral antibiotics for 5 days
Parotidectomy	Inj Augmentin (AMOX+ Clav) 1.2 gm	One hour before surgery	Twelve hours	48 hours followed by oral antibiotics for 5 days
Neck Dissection	Inj Augmentin (AMOX+ Clav) 1.2 gm	One hour before surgery	Twelve hours	48 hours followed by oral antibiotics for 5 days
Tonsillectomy	Inj Augmentin or Inj Taxim Acc to body weight	One hour before surgery	Twelve hours	- followed by oral antibiotics for 5 days
Tympanoplasty	Inj Augmentin (AMOX+ Clav) 1.2 gm Or Inj. Taxim 1 gm	One hour before surgery	Twelve hours	- followed by oral antibiotics for 5 days
Masoidectomy	Inj Augmentin (AMOX+ Clav) 1.2 gm Or Inj. Taxim 1 gm	One hour before surgery	Twelve hours	- followed by oral antibiotics for 5 days
Endoscopic Sinus Surgery	Inj Augmentin (AMOX+ Clav) 1.2 gm Or Inj. Taxim 1 gm	One hour before surgery	Twelve hours	48 hours and followed by oral antibiotics for 5 days
Deep Neck Space Infection/ Abscess	Inj Augmentin (AMOX+ Clav) 1.2 gm Or Inj. Taxim 1 gm And Inj. Metronidazole 100 cc	Half an hour before surgery	Eight hours	72 hours and followed by oral antibiotics for 5 days
Septoplasty	Inj Augmentin (AMOX+ Clav) 1.2 gm Or Inj. Taxim 1 gm	One hour before surgery	Twelve hours	48 hours and followed by oral antibiotics for 5 days
Endonasal DCR	Inj Augmentin (AMOX+ Clav) 1.2 gm Or Inj. Taxim 1 gm	One hour before surgery	Twelve hours	48 hours followed by oral antibiotics for 5 days
Rhinoplasty	Inj Augmentin (AMOX+ Clav) 1.2 gm Or Inj. Taxim 1 gm	One hour before surgery	Twelve hours	48 hours followed by oral antibiotics for 5 days

CONTRIBUTORS

Dr. A. V. Bhole
Director

Dr. P.S. Chawla
Dean

Dr. Rajendra Harnagle,
Medical Superintendent

Dr. Uma A. Bhosale
Prof.& Head, Dept of Pharmacology

Dr. Sachin V. Wankhede
Prof.& Head, Dept of Microbiology

Dr. Rajendra S. Bangal
Prof.& Head, Dept of FMT

Dr. Shripad M. Bhat
Prof.& Head, Dept of Medicine

Dr. Pramod Lokhande
Prof.& Head, Dept of Orthopedics

Dr. Girish Saundattikar
Prof.& Head, Dept of Anaesthesia

Dr. Gauri Godbole
Prof.& Head, Dept of Resp.Medicine

Dr. Gulabsing Shekhavat
Prof.& Head, Dept of OBGY

Dr. Kiran Shinde
Prof.& Head, Dept of ENT

Dr. Suvarna Gokhale
Prof.& Head, Dept of Ophthalmology

Dr. Snehal Purandare
Prof. Dept of Surgery

Dr. Sanjay Natu
Prof. Dept of Paediatrics

Dr. Neeta Gokhale
Prof.& Head, Dept of Skin

Dr. Archana C. Choure
Assist. Prof. Microbiology

Dr. Vinod S. Shinde
Assist. Prof. Pharmacology



**Department
of
Microbiology**

SKNMC & GH

