

PUBLISHED BY ALLIANCE FOR THE PRUDENT USE OF ANTIBIOTICS (APUA)-NEPAL

Editorial...

This is the tenth newsletter that APUA-Nepal presents you with. We hope that this newsletter will help us all in its small way, to not lose our focus from ever increasing problem of bacterial resistance.

APUA-Nepal intends to bring out its newsletter regularly to update our valued members about its activities, recent scenario and advancement in the field of anti-microbial resistance. We will indeed be grateful if you could contribute in any way possible by your suggestions, advice and comments.

We also like to request anyone working in the field of health profession to join us, to become member of APUA-Nepal.

We like to thank everyone who was involved in bringing out this newsletter.

Lastly, we intend to present this newsletter to our readers as a Dashain greetings. So, please accept our Dashain and Tihar greetings.

COMPARATIVE STUDY OF SENSITIVITY PATTERNS OF COMMON ISOLATES IN TRIBHUVAN UNIVERSITY TEACHING HOSPITAL (TUTH)

APUA- Nepal published antibiotic sensitivity patterns of common isolates in urine, blood and pus samples from different hospitals (regional, zonal and medical college teaching hospital) of Nepal in its Newsletter published from 2004 to 2011. The vol 9, 2012 was published compiling and comparing the data from 2004 - 2011 Newsletters. The average sensitivity percentage from TUTH is compared with average sensitivity patterns from the same hospital, published in vol 6, 2009. The average sensitivity percentage in isolates from May to July 2013 from the hospital are calculated and included in this report.

Source: Mr. Rajan Kumar Dahal, Lecturer, Department of Microbiology, TUTH, Kathmandu

Urine Isolates

Antibiotic sensitivity	% isolates sensitive May - July 2009 (n= 726)	% isolates sensitive May - July 2013 (n= 797)
<i>E. coli</i>		
Amikacin	89.4	90.0
Ampicillin	13.3	3.0
Cefepime	DNU	56.0
Cefixime	DNU	38.0
Cefotaxime	45.6	43.0
Ceftazidime	DNU	44.0
Ceftriaxone	51.0	44.0
Cephalexin	10.6	9.0
Ciprofloxacin	DNU	45.0
Colistin	DNU	100.0
Cotrimoxazole	40.6	46.0
Doxycycline	DNU	61.0
Gentamicin	67.8	64.0
Imipenem	DNU	90.0
Levofloxacin	DNU	57.0
Meropenem	DNU	89.0
Nalidixic Acid	29.5	DNU
Nitrofurantoin	84.5	90.0
Norfloxacin	44.7	DNU
Ofloxacin	DNU	49.0
Piperacillin	DNU	33.0
Piperacillin + tazobactam	DNU	72.0
Tigecycline	DNU	100.0

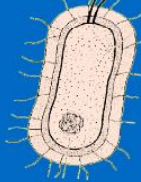
DNU= Disc not used

- Publication and distribution of vol. 9 of APUA-Nepal News-letter to different medical colleges and hospitals.
- Presentation of two papers on antibiotic resistance. The first “Antimicrobial Prescribing Practice and Rational Use of Antimicrobial in Nepal”, to the Advocacy Workshop on Antimicrobial Resistance (AMR) in Selected Bacterial Pathogens in Nepal, organized by the Nepal Public Health Laboratory/ MoHP in February 2013. The other paper, “Antibiotic Use and Drug Resistance Patterns”, was presented at the Inaugural Meeting and Workshop of the Global Antibiotic Resistance Partnership (GARP) in Nepal, in July 2013.

एन्टिबायोटिक ह्याक्टेरिया विरुद्ध लड़वध !


व्याक्टेरियाबाट हने सक्रमणहरुको उपचारको निम्न प्रयोग गरिने औषधीलाई एन्टिबायोटिक भनिन्छ ।

एन्टिबायोटिकको बिबेकपूर्ण प्रयोग नगर्नाले ज्ञान उपलब्ध छैरिजसो एन्टिबायोटिकसग प्रतिरोध गनसक्ने ज्यादै हानिकारक व्याक्टेरियाहरु देखा पर्न थालेका छन ।



...होशियार रहौ ।

- एन्टिबायोटिक थोकिमध्य वा साम्बलापान व्याक्क्यकीका प्रतिक्रमण अनुसार पुरा मात्रा सेवन गर्नु होस् ।
- एन्टिबायोटिक व्याक्टेरियाहरुको विरुद्ध मात्र उपयोगी हुन्छ, पाइरेस (Virus) बाट लाग्ने रोग जस्तै रुफाथोपीको उपचारको लागि कोहिने पनि एन्टिबायोटिक प्रयोग नगर्नुहोस् ।
- प्रतिक्रमण भिना एन्टिबायोटिक सेवन गर्नु र बराजुन व्याक्क्यको लागि हानिकारक हुनसक्छ ।



(The Alliance for the People's Use of Antibiotics (APUA) is working hard to ensure everyone has easy and safe access to APUA-Neppal antibiotics under supervision and guidance from health workers and health facilities.)

COMPARATIVE STUDY.....

Antibiotic sensitivity	% isolates sensitive May - July 2009	% isolates sensitive May - July 2013 (n= 108)	Antibiotic sensitivity	% isolates sensitive May - July 2009 (n=85)	% isolates sensitive May - July 2013 (n= 220)
<i>K. pneumoniae</i>			<i>S. aureus</i>		
Amikacin	Not	90.0	Amikacin	67.3	67.0
Cefepime	among	40.0	Ampicillin	16.5	8.0
Cefexime	four	55.0	Ampicillin + sulbactam	DNU	63.0
Cefotaxime	common	46.0	Cefexime	DNU	29.0
Ceftazidime	isolates	54.0	Cefotaxime	DNU	57.0
Ceftriaxone		54.0	Ceftriaxone	DNU	69.0
Cephalexin		28.0	Cephalexin	36.3	29.0
Ciprofloxacin		61.0	Ciprofloxacin	DNU	58.0
Colistin		100.0	Clindamycin	DNU	69.0
Cotrimoxazole		56.0	Cloxacillin	60.2	DNU
Gentamicin		33.0	Cotrimoxazole	44.2	14.0
Imipenem		90.0	Doxycycline	DNU	80.0
Levofloxacin		64.0	Gentamicin	62.8	37.0
Meropenem		87.0	Imipenem	DNU	73.0
Nitrofurantoin		27.0	Levofloxacin	DNU	58.0
Ofloxacin		50.0	Meropenem	DNU	71.0
Piperacillin + tazobactam		67.0	Nitrofurantoin	95.6	66.0
Piperacillin		12.0	Norfloxacin	52.4	DNU
Tigecycline		100.0	Ofloxacin	DNU	61.0
Antibiotic sensitivity	% isolates sensitive May - July 2009 (n=53)	% isolates sensitive May - July 2013 (n= 198)	Piperacillin + tazobactam	DNU	66.0
<i>E. faecalis</i>			Teicoplanin	DNU	100.0
Ampicillin	25.6	33.0	Tigecycline	DNU	100.0
Ampicillin + sulbactam	DNU	63.0	Vancomycin	DNU	100.0
Ciprofloxacin	DNU	58.0			
Clindamycin	DNU	42.0			
Doxycycline	DNU	61.0			
Imipenem	DNU	66.0			
Levofloxacin	DNU	66.0			
Nitrofurantoin	75.0	33.0			
Norfloxacin	25.3	DNU			
Ofloxacin	DNU	58.0			
Piperacillin + tazobactam	DNU	42.0			
Teicoplanin	DNU	100.0			
Vancomycin	100.0	100.0			

Pus Isolates			Antibiotic sensitivity	% isolates sensitive May - July 2009 (n=44)	% isolates sensitive May - July 2013 (n=27)
Antibiotic sensitivity	% isolates sensitive May - July 2009 (n=138)	% isolates sensitive May - July 2013 (n=131)			
<i>E. coli</i>			<i>P. aeruginosa</i>		
Amikacin	85.8	79.0	Amikacin	70.0	88.0
Ampicillin	6.6	9.0	Cefepime	DNU	83.0
Cefepime	DNU	56.0	Cefotaxime	DNU	74.0
Cefexime	DNU	21.0	Ceftazidime	24.9	79.0
Cefotaxime	57.8	43.0	Ceftriaxone	DNU	72.0
Ceftazidime	DNU	37.0	Cephalexin	DNU	33.0
Ceftriaxone	42.8	36.0	Ciprofloxacin	54.7	54.0
Cephalexin	8.9	12.0	Colistin	DNU	100.0
Ciprofloxacin	46.4	48.0	Gentamicin	55.7	74.0
Colistin	DNU	100.0	Imipenem	DNU	80.0
Cotrimoxazole	41.7	18.0	Levofloxacin	DNU	63.0
Doxycycline	DNU	61.0	Meropenem	DNU	80.0
Gentamicin	69.4	51.0	Ofloxacin	DNU	54.0
Imipenem	DNU	82.0	Piperacillin	80.0	74.0
Levofloxacin	DNU	54.0	Piperacillin + tazobactam	DNU	88.0
Meropenem	DNU	80.0	Blood Isolates		
Nitrofurantoin	DNU	42.0	Antibiotic sensitivity	% isolates sensitive May - July 2009	% isolates sensitive May - July 2013 (n=66)
Ofloxacin	DNU	49.0			
Piperacillin	DNU	72.0	<i>S. aureus</i>		
Piperacillin + tazobactam	DNU	80.0	Amikacin	Data not available	91.0
Tigecycline	DNU	100.0	Ampicillin		18.0
			Cefepime		66.6
Antibiotic sensitivity	% isolates sensitive May - July 2009	% isolates sensitive May - July 2013 (n=24)	Ceftriaxone		65.0
<i>K. pneumoniae</i>			Cephalexin		54.5
Amikacin	Not among four common isolates	67.0	Chloramphenicol		91.0
Cefexime		48.0	Clindamycin		57.6
Cefotaxime		73.0	Cloxacillin		66.6
Ceftriaxone		69.0	Cotrimoxazole		53.0
Cephalexin		16.0	Doxycycline		94.0
Ciprofloxacin		50.0	Erythromycin		33.3
Colistin		100.0	Imipenem		66.6
Cotrimoxazole		11.0	Levofloxacin		69.7
Doxycycline		64.0	Ofloxacin		63.6
Gentamicin		33.0	Teicoplanin		100.0
Imipenem		81.0	Vancomycin		100.0
Levofloxacin		73.0			
Meropenem		83.0	Antibiotic sensitivity	% isolates sensitive May - July 2009 (n=92)	% isolates sensitive May - July 2013 (n=22)
Ofloxacin		50.0	<i>S. typhi</i>		
Piperacillin		62.0	Ampicillin	90.3	91.0
Piperacillin + tazobactam		67.0	Azithromycin	100.0	100.0
Tigecycline		100.0	Cefepime	DNU	100.0
			Cefixime	DNU	100.0
Antibiotic sensitivity	% isolates sensitive May - July 2009 (n=249)	% isolates sensitive May - July 2013 (n=180)	Cefotaxime	100.0	DNU
<i>S. aureus</i>			Ceftazidime	100.0	DNU
Amikacin	79.4	67.0	Ceftriaxone	100.0	100.0
Ampicillin	22.7	6.0	Chloramphenicol	93.4	100.0
Cefexime	DNU	29.0	Ciprofloxacin	100.0	DNU
Cefotaxime	DNU	57.0	Cotrimoxazole	93.4	100.0
Ceftriaxone	DNU	69.0	Doxycycline	DNU	100.0
Cephalexin	31.6	29.0	Imipenem	100.0	100.0
Ciprofloxacin	53.7	58.0	Levofloxacin	DNU	27.0
Clindamycin	DNU	69.0	Nalidixic Acid	48.4	DNU
Cloxacillin	66.0	DNU	Ofloxacin	100.0	27.0
Cotrimoxazole	45.6	13.0			
Doxycycline	DNU	80.0	Antibiotic sensitivity	% isolates sensitive May - July 2009 (n=110)	% isolates sensitive May - July 2013 (n=27)
Erythromycin	53.2	DNU	<i>S. paratyphi A</i>		
Gentamicin	74.2	37.0	Ampicillin	91.8	81.5
Imipenem	DNU	73.0	Azithromycin	100.0	100.0
Levofloxacin	DNU	59.0	Cefepime	DNU	100.0
Meropenem	DNU	71.0	Cefixime	DNU	100.0
Nitrofurantoin	DNU	66.0	Cefotaxime	100.0	DNU
Ofloxacin	DNU	61.0	Ceftazidime	100.0	DNU
Piperacillin + tazobactam	DNU	66.0	Ceftriaxone	100.0	100.0
Teicoplanin	DNU	100.0	Chloramphenicol	94.5	100.0
Tigecycline	DNU	100.0	Ciprofloxacin	100.0	DNU
Vancomycin	DNU	100.0	Cotrimoxazole	94.5	100.0
			Doxycycline	DNU	96.3
			Imipenem	100.0	100.0
			Levofloxacin	DNU	3.7
			Nalidixic Acid	34.6	DNU
			Ofloxacin	100.0	3.7

FUTURE PROPOSED ACTIVITIES

- Getting approval of APUA- Nepal drafted antibiotic guidelines.
- Making clearinghouse for publications related to prudent use of antibiotics and AMR.
- Continuation of training on rational use of antimicrobials to fresh medical graduates in all medical colleges throughout Nepal.
- Making efforts to solicit funding for seminar on containment of AMR in SEAR countries.
- Publication of APUA-Nepal newsletter regularly to update scenario of antibiotic use, misuse, overuse and activities of APUA-Nepal.

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Please send your comments on the following:

1. Usefulness and quality of this newsletter

2. Suggestion for the future topics

3. Any other comments

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