

**BACTERIAL ISOLATES AND THEIR ANTIBIOGRAM FROM
WOUNDS AND ABSCESSSES OF SURGICAL OUTPATIENTS
VISITING BIR HOSPITAL**

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(MEDICAL)**

BY

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ABSTRACT

The present study was carried out in Bir Hospital, Kathmandu with a view to observe the pattern of bacterial isolates and their antibiotic sensitivity pattern from wounds and abscesses of surgical outpatients for the period of 10 months (August 2006 to June 2007). Altogether 400 wound specimens were collected and processed as per the standard protocol. Male patients were found to be marginally more vulnerable to wound infection constituting 56.75% (n=227) of the total patients than females 43.25% (n=173). The younger patients belonging to age group 21-30 (n=121, 30.25%) were found to be highly affected i.e. there was significant difference in the occurrence of wound infection among males and females in different age groups. Growth was found in 68.25% (n=273%) of the sample, out of which 239 (87.54%) showed the growth of single bacteria and 34 (12.40%) showed the presence of multiple bacteria. 307 bacteria of 15 species which included 6 species of Gram positive bacteria and 9 species of Gram negative bacteria were isolated from 273 growth positive samples, out of which 204 (66.45%) were Gram positive and 103 (33.55%) were Gram negative. Different pattern of bacteria were isolated from different types of wounds. *S. aureus* (n=143, 46.58%) was the most common bacteria. *E. coli* was found to be the second most common bacteria (n=38, 12.38%) followed by CONS (n=35, 11.40%) and *P. aeruginosa* (n=23, 7.49%). Other isolates were *S. pyogenes*, other haemolytic streptococci, non-haemolytic streptococci, Gram positive rods (unidentified), *Klebsiella* spp., *Enterobacter* spp., *Proteus* spp., *Acinetobacter* spp. and *Citrobacter* spp. Direct gram stain smear showed similar results as culture results. Antibiotic sensitivity showed Ofloxacin (82.33%) as the most effective drug followed by Gentamicin (74.67%) and Ciprofloxacin (70.33%) for overall bacterial isolates. For Gram positive bacteria, most effective drug was Ofloxacin (87.81%) but for Gram negative bacteria Gentamicin was the most effective (72.81%) followed by Ofloxacin (71.84%). Most of the bacterial isolates were resistant to Ampicillin (61%) and Amoxycillin (52.33%). Hence it was concluded that wound infections are the major health problem of Nepalese. Routine microbiological analysis of the wound specimens and their antibiotic susceptibility testing is recommended that will guide clinician for treatment of wound infection.

Key words: wounds, outpatients, antibiotics, bacterial isolates

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LIST OF ABBREVIATION

BA	Blood Agar
CA	Chocolate Agar
<i>C. freundii</i>	<i>Citrobacter freundii</i>
CMB	Cooked Meat Broth
CONS	Coagulase Negative Staphylococci
<i>E. aerogenes</i>	<i>Enterobacter aerogenes</i>
<i>E. coli</i>	<i>Escherichia coli</i>
GNB	Gram Negative Bacilli
GPB	Gram Positive Bacilli
GPC	Gram Positive Cocci
<i>K. oxytoca</i>	<i>Klebsiella oxytoca</i>
<i>K. pneumoniae</i>	<i>Klebsiella pneumoniae</i>
MA	MacConkey Agar
MHA	Muller Hinton Agar
NA	Nutrient Agar
<i>P. aeruginosa</i>	<i>Pseudomonas aeruginosa</i>
<i>P. mirabilis</i>	<i>Proteus mirabilis</i>
<i>P. vulgaris</i>	<i>Proteus vulgaris</i>
<i>S. aureus</i>	<i>Staphylococcus aureus</i>
<i>S. epidermidis</i>	<i>Staphylococcus epidermidis</i>
<i>S. pneumoniae</i>	<i>Streptococcus pneumoniae</i>
<i>S. pyogenes</i>	<i>Streptococcus pyogenes</i>
<i>S. saprophyticus</i>	<i>Staphylococcus saprophyticus</i>
SOPD	Surgical Outpatient Department
SSI	Surgical Site Infection
WHO	World Health Organization

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