

(2002/5/14 2002/1/15)

(802)) (

(600) (531)

(310)

:

(%51.68)

(%15) *Klebsiella* -1

(%11.33) *Enterobacter* -2

(%6) *Pseudomonas* -3

(%4.66) *Escherichia* -4

(%4) *Serratia* -5

(%3.33) *Alcaligenes* -6

(%2.33) *Proteus* -7

(%2) *Citrobacter* -8

(%1.33) *Hafnia* -9

(%1) *Providenciae* -10

(%0.66) *Morganella* -11

(%31.66) (190)

(%9.5) *Staph. aureus* (%29.16)

(%1.5) *Strep. faecalis* (%2.5)

(%16.66) (100) (%1) *Strep. agalactiae*

(%3.16) *B. coagulans* (%5.33) *B. cereus* (%8.16) *B. subtilis*

Isolation and Identification of Bacteria Contaminating the Operating Theatres

Hanan S. Noore

*Department of Basic Medical Science
College of Nursing
Mosul University*

Adeeba Y. Shareef

*Department of Biology
College of Science
Mosul University*

ABSTRACT

The study aimed to isolate and identify the types of bacteria contaminating the environment of operating theaters of three hospitals in Mosul (AL-Khansa', AL-Zahrawi and Saddam General). (802) different environmental hospital specimens were taken, (531) samples were positive and 600 bacterial isolates were isolated and diagnosed using morphological and biochemical tests into (310) isolates (51.68%) of Gram negative bacilli, which included:

- | | |
|-------------------------|----------|
| 1. <i>Klebsiella</i> | (15%) |
| 2. <i>Enterobacter</i> | (11.33%) |
| 3. <i>Pseudomonas</i> | (6%) |
| 4. <i>Escherichia</i> | (4.66%) |
| 5. <i>Serratia</i> | (4%) |
| 6. <i>Alcaligenes</i> | (3.33%) |
| 7. <i>Proteus</i> | (2.33%) |
| 8. <i>Citrobacter</i> | (2%) |
| 9. <i>Hafnia</i> | (1.33%) |
| 10. <i>Providenciae</i> | (1%) |
| 11. <i>Morganella</i> | (0.66%) |

(190) isolates (31.66 %) of Gram positive Cocci which included *Staphylococcus* (29.16%) which were divided into seven species with *Staph. aureus* being the dominant (9.5%), while the *Streptococci* comprised (2.5%) which included *Streptococcus faecalis* (1.5%) and *Streptococcus agalactiae* and (100) isolates (16.66%) of Gram positive bacilli which included three species *B. subtilis* (8.16%), *B. cereus* (5.33%) and *B. coagulans* (3.16%).

(Nosocomial Infections)

(AL-Taha, 2000; Mangram et al., 1999; AlCamo, 1998; Nicoles and Zwelling, . 1997)

Pseudomonas, Staphylococcus , E. coli

(*Nosocomial pneumoniae*)

(Jaeger et al., 1999; Jarvis et al., 1996; Edwards et al., 1995)

(A)

Staph. (*Streptococcus* Group-A)
aureus

Enterobacteriaceae, (*Bacilli*)
.Pseudamonas aeruginosa

Staph. aureus

(Rutala et al., 2000; Lowdermilk (VRE) *Enterococci* (MRSA)
(1998) Weinstein et.al., 1997)

Enterococci Coagulase Negative *Staphylococcus aureus* (CNSA)

Pseud. aeruginosa, E. (%34)

(1997) Jones *coli*

Pseud. aeruginosa

E. coli

.(UTI)

(Cupitt, 2000; Raedler et al., 1999 ; Kool et N.I
al., 1999; Wang et al., 1999; Fridkin et al., 1997; Shienlu and Hochan, 1997)

() 802
2001 2000

(Nayak et al., 1993)

(Brain Heart Infusion ³ (5)
(24) °(37) Broth)
(loop)
(24) °(37)
(24) °(37)

(Anaerobic Jar)

(%10-5) Co₂

(Koneman et al., 1997)

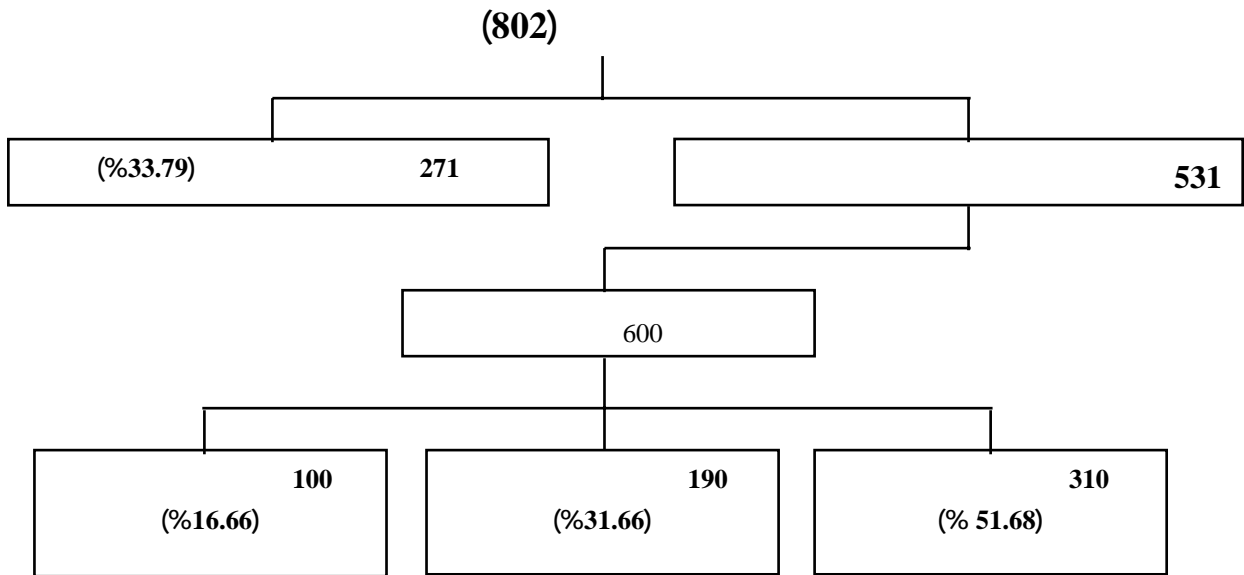
(Smears)

(Prescott et al., 1996)

(3 2 1)

(%66.21) 531 (802)
 (69)
 (600)
 (190) (51.7) (310)
 (%16.7) (100) (%31.7)

.(1)



: 1

(2)

(%51.68) (310)
 (100) (%31.66) (190)
 (%16.66)
 (%0.66) (%15)
 30] (*Klebsiella*) (%15) (90) :
 16 *K. oxytoca* (%3) 18 *K. ozaenae* (%4.33) 26 *K. pneumoniae* (%5)
Enterobacter (%11.33) 68 .[*K. rhinoscleromatis* (%2.66)

(%6) 36 .[*E. cloacae* (%3.33) 20 *E. aerogenes* (%8) 48]
 18 *P. aeruginosa* (%3) 18] *Pseudomonas*
Escherichia (%4.66) 28 [*P. pseudomallei* (%3)
S. Serratia (%4) 24 *E. coli*
A. Alcaligenes (3.33%) 20 *liquefaciens*
P. (%1.33) 8] Proteus (%2.33) 14 *faecalis*
Citrobacter (%2) 12 [*P. mirabilis* (%1.0) 6 *vulgaris*
 6 *H. alvei* *Hafnia* (%1.33) 8 *C. freundii*
 4 *P. rettgeri* *Providencia* (%1)
M. morganii *Morganella* (%0.66)
 (%16.66) 100
 19 *B. cereus* (%5.33) 32 *B. subtilis* (%8.16) 49] : *Bacillus*
 .[*B. coagulans* (%3.16)
 175 (%31.66) 190
 57] : *Staphylococcus* (%29.16)
 17 *S. hominis* (%4.33) 26 *S. haemolyticus* (%8) 48 *S. aureus* (%9.5)
S. (%1.66) 10 S. saprophyticus (%1.83) 11 *S. epidermidis* (%2.83)
 (%2.5) 15 [*S. warneri* (%1) 6 *simulans*
 6 *Strep. faecalis* (%1.5) 9] : *Streptococcus*
 .[*Strep. agalactiae* (%0.5)

(1)

(%94.44)

(%22.22)

(%91.66)

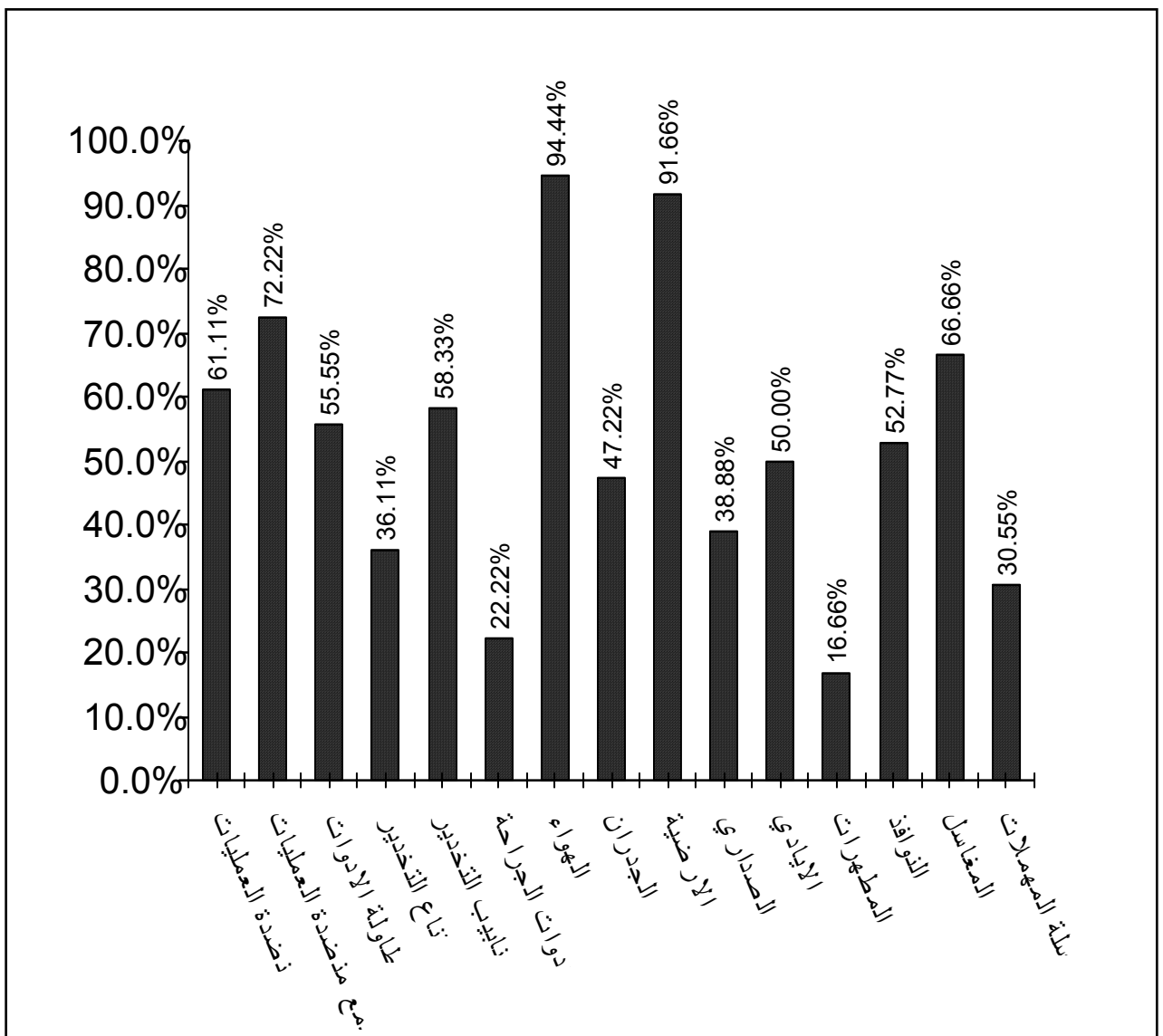
(%16.66)

) 120-100)

(1)

) 121)

(Mclaughlin and Palermo, 1996).

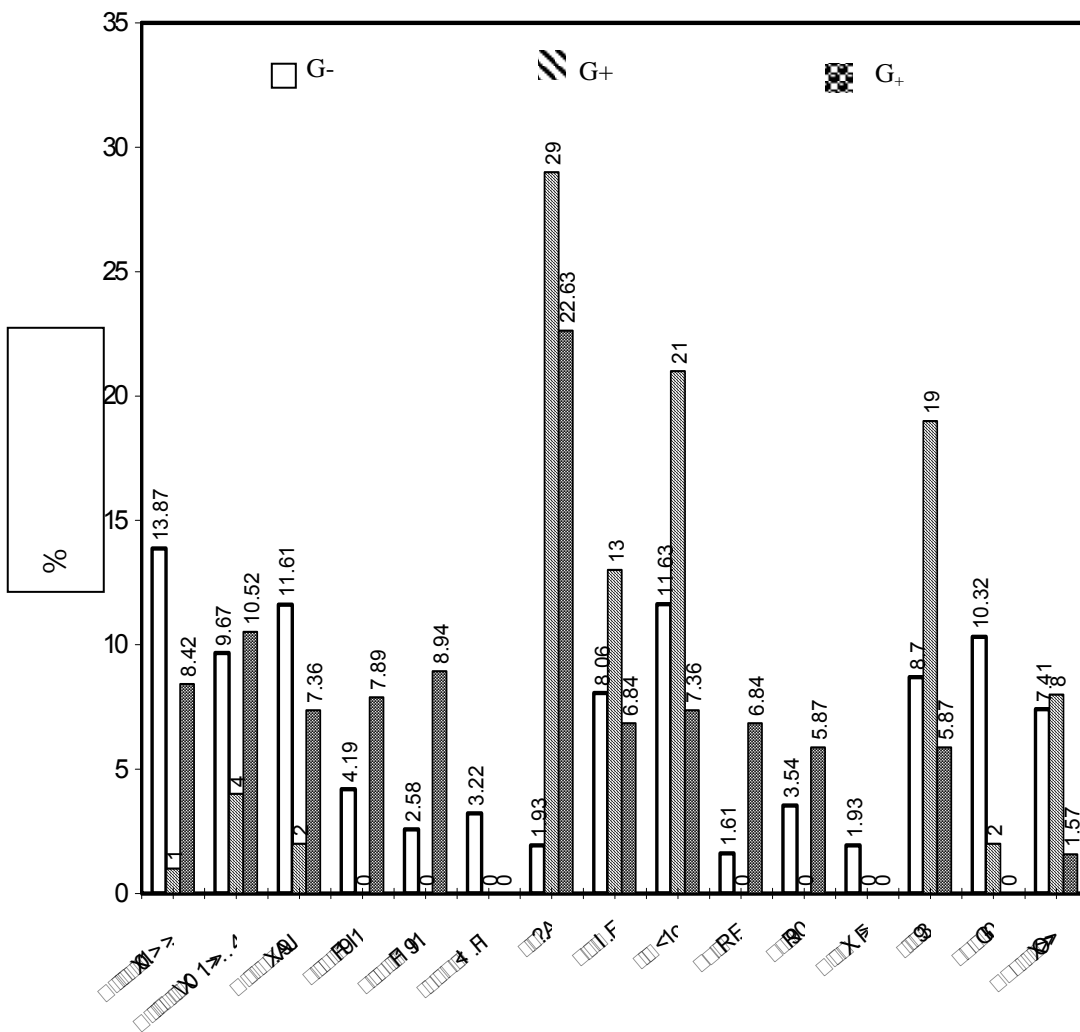


(2)

(%19) (%21)

(%29)

.(Koneman et al., 1997; Baron and Finegold, 1990)



(G + G+ G-) : 2

(2)
 (%22.65)
 (%8.94) (10.52)
 (1994) Ayliffe
 . (Brooks et al., 1998) . (%30-20)
 (2)
 (%13.87)
 (%10.32) (%11.61) (%11.93)
 (%1.93) (%1.61)
 . (%2.58)
 .(1966) Ayliffe
 Goldmann (1977) Stamm
 (1991)
 (NICUs) Neonatal Intensive Care Units

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