# RESULTS

## Table(5) : Personal data of group I (culture-proven sepsis)

| No | Sex | Age/days | Wt/gm | gest Age(ws) | Place of deliv. | Umb Cath. | Mech Ventil | Intub | Mode of deliv | PROM | Diff.lab | Antibiotics intake | Mat. HTN | Mat AN fever | TPN | Umb. Sepsis | Outcome |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M | 14 | 2.300 | 35 | Hospital | X | X | X | C.S | X | √ | √ | X | X | √ | √ | Cured |
| 2 | M | 7 | 1.825 | 33 | Home | X | X | X | Vaginal | X | √ | X | X | X | √ | X | Died |
| 3 | F | 9 | 1.520 | 30 | Hospital | √ | X | X | C.S | X | √ | √ | √ | X | √ | X | Died |
| 4 | M | 5 | 2.210 | 35 | Home | X | √ | √ | Vaginal | √ | √ | X | X | √ | √ | X | Died |
| 5 | F | 4 | 1.080 | 29 | Hospital | X | X | X | C.S | X | X | √ | X | X | √ | X | Cured |
| 6 | M | 3 | 2.100 | 35 | Hospital | √ | X | X | C.S | X | √ | √ | X | X | √ | X | Cured |
| 7 | M | 13 | 0.930 | 29 | Hospital | X | √ | √ | Vaginal | √ | √ | X | X | √ | √ | √ | Died |
| 8 | M | 8 | 1.950 | 33 | Home | X | X | X | Vaginal | X | X | X | X | X | √ | X | Cured |
| 9 | M | 6 | 1.950 | 34 | Hospital | X | X | X | Vaginal | √ | X | X | X | X | X | X | Died |
| 10 | F | 4 | 1.570 | 30 | Hospital | X | X | X | Vaginal | X | X | X | X | X | √ | X | Died |
| 11 | M | 6 | 1.220 | 26 | Hospital | X | √ | √ | C.S | √ | √ | √ | X | X | √ | X | Died |
| 12 | M | 5 | 1.400 | 34 | Hospital | √ | √ | √ | Vaginal | X | √ | X | X | X | √ | X | Died |
| 13 | F | 3 | 2.100 | 34 | Hospital | X | X | X | Vaginal | √ | X | X | X | X | X | √ | Cured |
| 14 | M | 11 | 1.100 | 29 | Hospital | X | √ | √ | C.S | √ | √ | √ | X | √ | √ | X | Cured |
| 15 | F | 3 | 1.750 | 32 | Hospital | X | √ | √ | Vaginal | X | X | X | X | X | √ | X | Died |
| 16 | M | 5 | 0.910 | 26 | Hospital | X | √ | √ | C.S | √ | √ | √ | X | X | √ | X | Died |
| 17 | M | 10 | 2.170 | 34 | Hospital | X | X | X | Vaginal | X | √ | X | X | X | X | X | Cured |
| 18 | F | 10 | 1.350 | 30 | Home | X | √ | √ | Vaginal | X | √ | X | √ | X | √ | X | Died |
| 19 | M | 7 | 2.320 | 35 | Hospital | √ | X | X | Vaginal | √ | √ | X | √ | X | √ | X | Cured |
| 20 | M | 9 | 0.850 | 29 | Hospital | X | √ | √ | C.S | √ | √ | √ | √ | √ | √ | X | Died |

## Table(6) : CLINICAL DATA OF GROUP I (culture-proven sepsis)

| No | Temp (c) | RR/min | HR/min | HC (cm) | Length (cm) | Cap.refill. time | Poor suckling | More R. | Leth./irrit | M.S tone | Convultion | Bulg.A.font. | Paller | Sclero-dema | Hepato megly | Jundice | Cyanosis | Abd. Disten. | Crepit | Murmur | Sepsis score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 37.2 | 50 | 160 | 33 | 41 | ↓ | x | ↓ | irr | ↑ | √ | √ | √ | X | X | X | X | √ | X | X | 2 |
| 2 | 38 | 40 | 160 | 30 | 41 | ↓ | x | ↓ | leth | N | X | X | X | X | X | X | X | X | X | √ | 3 |
| 3 | 38.2 | 70 | 190 | 30 | 39 | ↓ | √ | ↓ | leth | ↑ | √ | X | X | X | X | √ | X | X | X | X | 5 |
| 4 | 38 | 50 | 180 | 33 | 45 | ↓ | x | ↓ | leth | ↑ | √ | X | X | X | X | √ | √ | X | X | √ | 5 |
| 5 | 37.2 | 60 | 180 | 30 | 39 | √ | x | ↓ | leth | N | √ | X | √ | X | X | √ | X | X | X | X | 3 |
| 6 | 36.5 | 70 | 170 | 32 | 45 | ↓ | x | ↓ | leth | ↑ | √ | X | X | X | X | X | X | X | X | X | 4 |
| 7 | 36.2 | 50 | 180 | 31 | 43 | ↓ | √ | ↓ | irr | ↑ | √ | √ | √ | √ | X | X | X | X | X | √ | 3 |
| 8 | 37.7 | 65 | 170 | 32 | 43 | ↓ | √ | ↓ | leth | ↓ | X | X | √ | X | X | √ | √ | √ | √ | X | 5 |
| 9 | 36.2 | 50 | 180 | 32 | 42 | ↓ | √ | ↓ | leth | ↑ | √ | X | √ | X | X | X | X | X | X | √ | 3 |
| 10 | 37.8 | 40 | 160 | 30 | 39 | ↓ | √ | ↓ | leth | N | X | X | X | X | X | X | √ | X | X | X | 4 |
| 11 | 36.2 | 90 | 183 | 31 | 35 | √ | √ | ↓ | leth | ↓ | √ | X | √ | X | X | √ | √ | X | X | √ | 4 |
| 12 | 37.1 | 45 | 150 | 31 | 40 | √ | √ | ↓ | leth | ↓ | X | X | √ | X | X | √ | X | √ | X | X | 2 |
| 13 | 38.2 | 60 | 170 | 32 | 40 | √ | √ | ↓ | leth | ↓ | √ | X | √ | X | √ | √ | X | √ | X | X | 3 |
| 14 | 37.8 | 45 | 180 | 30 | 40 | √ | √ | ↓ | leth | ↓ | √ | X | √ | X | X | √ | X | √ | X | X | 3 |
| 15 | 37.1 | 67 | 140 | 31 | 41 | √ | √ | ↓ | leth | ↓ | X | X | √ | X | X | X | X | X | X | X | 2 |
| 16 | 36 | 40 | 170 | 29 | 31 | √ | √ | ↓ | leth | ↓ | X | X | √ | X | X | X | X | X | X | X | 2 |
| 17 | 38.1 | 50 | 190 | 32 | 41 | ↓ | X | ↓ | irr | ↑ | √ | X | √ | X | X | X | X | X | X | X | 4 |
| 18 | 37.8 | 55 | 190 | 33 | 40 | ↓ | √ | ↓ | leth | N | X | X | X | X | X | √ | √ | X | X | X | 5 |
| 19 | 38.2 | 50 | 180 | 34 | 43 | ↓ | √ | ↓ | leth | ↓ | X | X | √ | X | √ | √ | X | X | X | X | 4 |
| 20 | 36.2 | 50 | 190 | 30 | 41 | √ | √ | ↓ | irr | ↑ | √ | X | √ | X | x | √ | X | √ | X | X | 3 |

## Table(7) : Laboratory and radiological findings of group I (culture-proven sepsis)

| No | Hb% (gm/dL) | TLC ($x10^3/mm^2$) | Band% | CRP (gm/dL) | Plat. ($x10^3/mm^3$) | PC.T (ng/ml) | Bl.C/S | Urine C/S | C.S.F. C/S | Other. C/S | CXR | ECG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16.5 | 15.7 | 7 | 70 | 135 | < 0.5 | Klebsiella | X | Klebsiella | X | N | N |
| 2 | 12 | 15.5 | 20 | 90 | 50 | >10 | Klebsiella | X | X | X | N | AN |
| 3 | 10.5 | 15.3 | 5 | 150 | 50 | >10 | Klebsiella | X | X | X | N | N |
| 4 | 14.5 | 19.8 | 30 | 70 | 170 | >10 | Klebsiella | X | X | X | AN | AN |
| 5 | 10 | 18.5 | 18 | 210 | 170 | >10 | Staph | X | X | X | N | N |
| 6 | 11.5 | 10.4 | 8 | 150 | 180 | >10 | Staph | X | X | X | N | N |
| 7 | 15 | 10.3 | 11 | 200 | 90 | 0.5-2 | Staph | X | X | X | N | N |
| 8 | 12 | 21 | 13 | 180 | 140 | >10 | Staph | X | X | X | AN | N |
| 9 | 15.5 | 11 | 17 | 90 | 165 | 2-10 | Ecoli | X | X | X | N | AN |
| 10 | 14 | 13.5 | 8 | 7 | 90 | 2-10 | Entrobacter | X | X | X | N | N |
| 11 | 9.9 | 10.4 | 14 | 207 | 60 | 2-10 | Staph | X | X | X | N | N |
| 12 | 13.2 | 10.3 | 19 | 205 | 430 | 2-10 | Staph | X | X | X | N | N |
| 13 | 10.5 | 11.2 | 14 | 160 | 140 | 2-10 | Staph | X | X | X | N | N |
| 14 | 16 | 14.5 | 19 | 100 | 152 | 2-10 | Staph | Staph | X | X | N | N |
| 15 | 11.9 | 16.4 | 12 | 200 | 32 | 2-10 | Staph | X | X | X | N | N |
| 16 | 16 | 18.19 | 19 | 7 | 90 | 2-10 | Staph | X | X | X | An | N |
| 17 | 13.9 | 26.5 | 14 | 210 | 96 | 2-10 | Ecoli | X | X | X | N | N |
| 18 | 7.5 | 16.5 | 2 | 120 | 120 | 2-10 | Klebsiella | X | X | X | N | N |
| 19 | 11 | 15 | 14 | 130 | 140 | 2-10 | Entrobacter | X | X | X | N | N |
| 20 | 8 | 10 | 11 | 75 | 75 | 2-10 | Entrobacter | X | X | X | N | N |

## Table(8) : Personal data of group II (clinical sepsis)

| No | Sex | Age/days | Wt/gm | gest. Age(ws) | Place of deliv. | Umb. Cath. | Mech. Ventil | Intub | Mode of deliv | PROM | Diff.lab | Antibiotic intake | Mat HTN | Mat. AN.fever | TPN | Umb. Sepsis | Outcome |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | F | 4 | 0.790 | 28w | Hospital | X | X | √ | C.S | X | √ | √ | X | X | X | X | Died |
| 2 | M | 7 | 1.050 | 29w | Hospital | X | √ | √ | C.S | √ | X | √ | √ | X | √ | X | Died |
| 3 | F | 5 | 2.150 | 35w | Home | X | X | X | Vaginal | X | √ | √ | X | X | X | X | Cured |
| 4 | M | 4 | 0.980 | 28w | Hospital | X | X | X | C.S | X | √ | √ | √ | √ | √ | X | Died |
| 5 | M | 9 | 0.890 | 28w | Hospital | X | X | X | C.S | X | √ | √ | X | X | √ | X | Died |
| 6 | F | 5 | 2.200 | 34w | Hospital | √ | √ | √ | C.S | X | √ | √ | X | X | √ | X | Cured |
| 7 | M | 4 | 1.010 | 29w | Hospital | X | X | X | C.S | X | √ | √ | √ | X | √ | X | Cured |
| 8 | F | 10 | 2.220 | 35w | Hospital | √ | X | X | Vaginal | X | X | X | X | X | X | √ | Died |
| 9 | M | 3 | 1.700 | 32w | Hospital | X | X | X | Vaginal | √ | X | X | X | √ | X | X | Died |
| 10 | M | 5 | 0.970 | 28w | Hospital | X | X | X | C.S | X | √ | √ | X | X | √ | X | Cured |
| 11 | F | 9 | 1.350 | 30w | Hospital | X | √ | √ | Vaginal | X | X | √ | X | X | √ | X | Died |
| 12 | M | 8 | 0.950 | 28w | Hospital | X | √ | √ | C.S | √ | √ | √ | X | √ | √ | X | Cured |
| 13 | M | 5 | 2.250 | 35w | Hospital | X | X | X | Vaginal | X | X | X | X | X | X | X | Cured |
| 14 | F | 3 | 2.100 | 34w | Hospital | X | √ | √ | C.S | √ | √ | √ | X | √ | √ | X | Cured |
| 15 | F | 7 | 1.250 | 30w | Hospital | √ | X | X | C.S | X | √ | √ | X | X | √ | √ | Died |
| 16 | M | 8 | 0.820 | 28w | Hospital | X | √ | √ | C.S | √ | √ | √ | X | √ | √ | X | Died |
| 17 | F | 7 | 1.880 | 33w | Home | X | X | X | Vaginal | √ | √ | √ | X | √ | X | X | Died |
| 18 | F | 7 | 1.250 | 31w | Hospital | X | X | X | C.S | X | √ | √ | X | X | √ | X | Died |
| 19 | F | 5 | 2.110 | 30w | Home | √ | X | X | Vaginal | √ | √ | √ | X | √ | √ | √ | Died |
| 20 | M | 7 | 2.350 | 35w | Hospital | X | X | X | C.S | √ | √ | √ | X | X | X | X | Died |

## Table(9) : Clinical data OF GROUP II (clinical sepsis)

| No | Temp (c) | RR/min | HR/min | HC (cm) | Length (cm) | Cap.refill time | Poor suckling | More R. | Leth./irrit | M.S tone | Convultion | Bulg.A.font. | Paller | Sclero-dema | Hepato megly | Jundice | Cyanosis | Abd. Disten. | Crepit | Murmur | Sepsis score |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36.2 | 80 | 195 | 30 | 35 | ↓ | √ | ↓ | leth | ↓ | X | X | X | X | X | √ | X | X | √ | X | 2 |
| 2 | 38.5 | 70 | 190 | 29 | 35 | ↓ | √ | ↓ | leth | N | X | X | √ | X | X | √ | X | X | X | √ | 2 |
| 3 | 38.5 | 70 | 180 | 32 | 42 | ↓ | X | ↓ | Irr | ↑ | √ | X | √ | X | X | √ | X | X | X | X | 3 |
| 4 | 37.5 | 75 | 140 | 30 | 39 | ↓ | X | ↓ | Leth | N | X | X | √ | X | X | X | X | √ | X | X | 2 |
| 5 | 36.5 | 60 | 190 | 31 | 38 | ↓ | √ | ↓ | Leth | ↓ | X | X | X | X | √ | √ | √ | X | √ | X | 2 |
| 6 | 36.2 | 75 | 180 | 32 | 45 | ↓ | √ | ↓ | Leth | N | X | X | √ | X | √ | √ | X | X | X | X | 4 |
| 7 | 38.5 | 70 | 200 | 30 | 39 | ↓ | √ | ↓ | Irr | ↑ | √ | √ | √ | X | X | √ | X | X | √ | X | 3 |
| 8 | 38.2 | 60 | 160 | 31 | 42 | ↓ | X | ↓ | Leth | N | X | X | X | X | X | √ | X | √ | X | √ | 2 |
| 9 | 38.1 | 70 | 180 | 32 | 41 | ↓ | X | ↓ | leth | N | X | X | X | X | X | X | X | X | X | X | 3 |
| 10 | 36.3 | 60 | 190 | 29 | 38 | N | √ | ↓ | leth | N | X | X | √ | X | X | √ | X | X | X | X | 2 |
| 11 | 37.8 | 70 | 160 | 32 | 41 | ↓ | X | ↓ | Irr | ↑ | X | X | √ | X | X | X | √ | X | √ | X | 2 |
| 12 | 36.5 | 60 | 180 | 30 | 37 | N | √ | ↓ | leth | N | X | X | √ | X | X | X | √ | X | X | X | 2 |
| 13 | 37.2 | 70 | 190 | 34 | 48 | ↓ | √ | ↓ | leth | ↓ | √ | X | √ | X | X | √ | X | X | X | X | 2 |
| 14 | 38 | 70 | 190 | 33 | 42 | ↓ | √ | ↓ | leth | ↓ | X | X | √ | X | X | √ | √ | √ | X | √ | 2 |
| 15 | 37.8 | 45 | 175 | 32 | 38 | ↓ | √ | ↓ | leth | ↓ | X | X | X | X | X | X | √ | √ | X | X | 2 |
| 16 | 36.2 | 70 | 190 | 29 | 35 | ↓ | X | ↓ | leth | ↑ | √ | X | X | X | X | √ | X | X | X | X | 2 |
| 17 | 36.8 | 60 | 160 | 31 | 40 | ↓ | X | ↓ | Leth | N | √ | X | X | X | X | √ | X | √ | X | X | 2 |
| 18 | 36.2 | 70 | 180 | 30 | 42 | ↓ | X | ↓ | Irr | ↑ | √ | √ | √ | X | √ | √ | X | X | X | X | 2 |
| 19 | 38.5 | 75 | 190 | 30 | 40 | ↓ | √ | ↓ | Leth | ↓ | X | X | √ | X | √ | √ | X | √ | X | X | 2 |
| 20 | 37.8 | 65 | 193 | 32 | 41 | ↓ | X | ↓ | Leth | N | X | X | √ | X | X | X | X | X | X | X | 2 |

## Table(10) : Laboratory and radiological findings of group II ( clinical sepsis)

| No | Hb% (gm/dL) | TLC ($x10^3/mm^2$) | Band% | CRP (gm/dL) | Plat. ($x10^3/mm^3$) | PC.T (ng/ml) | Bl.C/S | Urine C/S | C.S.F. C/S | Other. C/S | CXR | ECG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.5 | 21.5 | 5 | 50 | 181 | >10 | No. growth | X | X | X | AN | N |
| 2 | 4.5 | 5.5 | 12 | 200 | 155 | >10 | No. growth | X | X | X | N | AN |
| 3 | 12.5 | 5 | 11 | 12 | 135 | >10 | No. growth | X | X | X | N | N |
| 4 | 10.8 | 22 | 15 | 20 | 185 | >10 | No. growth | X | X | X | N | N |
| 5 | 9.3 | 5 | 20 | 120 | 88 | >10 | No. growth | X | X | X | N | N |
| 6 | 9 | 3.5 | 25 | 55 | 130 | >10 | No. growth | X | X | X | N | N |
| 7 | 9.5 | 22 | 12 | 270 | 123 | >10 | No. growth | X | No growth | X | AN | N |
| 8 | 8 | 4.5 | 9 | 80 | 35 | 2-10 | No. growth | X | X | X | N | AN |
| 9 | 13 | 3.5 | 25 | 70 | 134 | 2-10 | No. growth | X | X | X | N | N |
| 10 | 9 | 25 | 12 | 209 | 125 | 2-10 | No. growth | X | X | X | N | N |
| 11 | 13 | 23 | 2 | 100 | 194 | 2-10 | No. growth | X | X | X | AN | N |
| 12 | 7 | 5.2 | 10 | 120 | 130 | 2-10 | No. growth | X | X | X | N | N |
| 13 | 14 | 16 | 5 | 150 | 170 | 2-10 | No. growth | X | X | X | N | N |
| 14 | 13.5 | 15 | 10 | 170 | 110 | 2-10 | No. growth | X | X | X | AN | AN |
| 15 | 13 | 4.2 | 4 | 50 | 140 | 2-10 | No. growth | X | X | X | N | N |
| 16 | 12 | 15 | 10 | 8 | 180 | 2-10 | No. growth | X | X | X | N | N |
| 17 | 13 | 5.4 | 20 | 130 | 132 | 2-10 | No. growth | X | X | X | N | N |
| 18 | 10 | 22 | 18 | 60 | 251 | 2-10 | No. growth | X | X | X | N | N |
| 19 | 9.5 | 7.2 | 20 | 150 | 172 | 0.5-2 | No. growth | X | X | X | N | N |
| 20 | 16 | 14.9 | 20 | 155 | 162 | 0.5-2 | No. growth | X | X | X | N | N |

## Table(11): History and examination of group III (Control group)

| | History | | | | Examination | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| No | Sex | Age /days | Ges. Age (ws) | Wt /gm | Temp. ($C^0$) | RR/MIN | HR/MIN | H.C (cm) | Length (cm) | Cap.refill.time |
| 1 | F | 7 | 29 | 0.910 | 36.7 | 55 | 170 | 29 | 32 | √ |
| 2 | M | 7 | 30 | 1.110 | 36.8 | 40 | 180 | 31 | 36 | √ |
| 3 | F | 5 | 31 | 1.450 | 37.2 | 50 | 140 | 30 | 32 | √ |
| 4 | M | 4 | 29 | 0.920 | 36.2 | 60 | 150 | 28 | 30 | √ |
| 5 | F | 3 | 30 | 1.220 | 36.7 | 50 | 170 | 30 | 33 | √ |
| 6 | M | 9 | 31 | 1.530 | 37.2 | 40 | 130 | 29 | 37 | √ |
| 7 | M | 9 | 32 | 1.510 | 37 | 54 | 140 | 30 | 38 | √ |
| 8 | M | 4 | 33 | 1.480 | 37.2 | 40 | 140 | 32 | 40 | √ |
| 9 | M | 9 | 33 | 2.350 | 37.5 | 50 | 160 | 32 | 42 | √ |
| 10 | M | 10 | 34 | 1.520 | 37.1 | 40 | 130 | 32 | 41 | √ |

## Table(12) : Laboratory findings of group III (Control group)

| No | Hb% (gm/dl) | TLC ($x10^3/mm^3$) | Band.% | Plat. ($x10^3/mm^2$) | CRP (gm/dl) | PCT (ng/ml) | bl. C/S | Urine C/S | C.S.F C/S | Others C/S | Outcome |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 14.7 | 5.9 | 1 | 260 | 9 | < 0.5 | X | X | X | X | died |
| 2 | 16.8 | 5.3 | 2 | 230 | 13 | < 0.5 | X | X | X | X | died |
| 3 | 15.5 | 4.5 | 2 | 290 | 6 | 0.5-2 | X | X | X | X | cured |
| 4 | 17 | 5.2 | 2 | 220 | 15 | < 0.5 | X | X | X | X | cured |
| 5 | 15.4 | 5.3 | 1 | 270 | 3 | < 0.5 | X | X | X | X | died |
| 6 | 16.2 | 8.5 | 1 | 220 | 9 | < 0.5 | X | X | X | X | cured |
| 7 | 14.7 | 8.5 | 1 | 235 | 8 | < 0.5 | X | X | X | X | cured |
| 8 | 13.8 | 4.5 | 2 | 432 | 7 | < 0.5 | X | X | X | X | cured |
| 9 | 17.2 | 6.8 | 1 | 470 | 8 | < 0.5 | X | X | X | X | cured |
| 10 | 15.5 | 16 | 2 | 300 | 7 | < 0.5 | X | X | X | X | cured |

Table (13):Sex distribution in studied groups

| Sex of group I (+ve blood culture) (N = 20) | No | % | Sex of group II (-ve blood culture) (N = 20) | No | % | Sex of control group (GroupIII) (N=10) | No | % | X2 | P |
|---|---|---|---|---|---|---|---|---|---|---|
| Male | 14 | 70% | Male | 12 | 60% | Male | 7 | 70% | 1.66 | #0.33 |
| Female | 6 | 30% | Female | 8 | 40% | Female | 3 | 30% | | |

**X2=Pearson chi-square**

**# Statistically insignificant**

Table (14): Comparison between studied groups as regards gestational age (weeks)

| | Group I (+ve blood culture) (N=20) | Group II (-ve blood culture) (N=20) | Control group (Group III) (N = 10) |
|---|---|---|---|
| • Mean | 31.60 | 31.00 | 31.2 |
| • ± SD | 2.99 | 2.82 | 1.75 |
| • F | 0.247 | | |
| • P | #0.782 | | |

**± SD= Standard deviation**

**F=Fisher' Exact test**

**# Statistically insignificant**

# Fig4:Sex distribution in septic groups and control group.

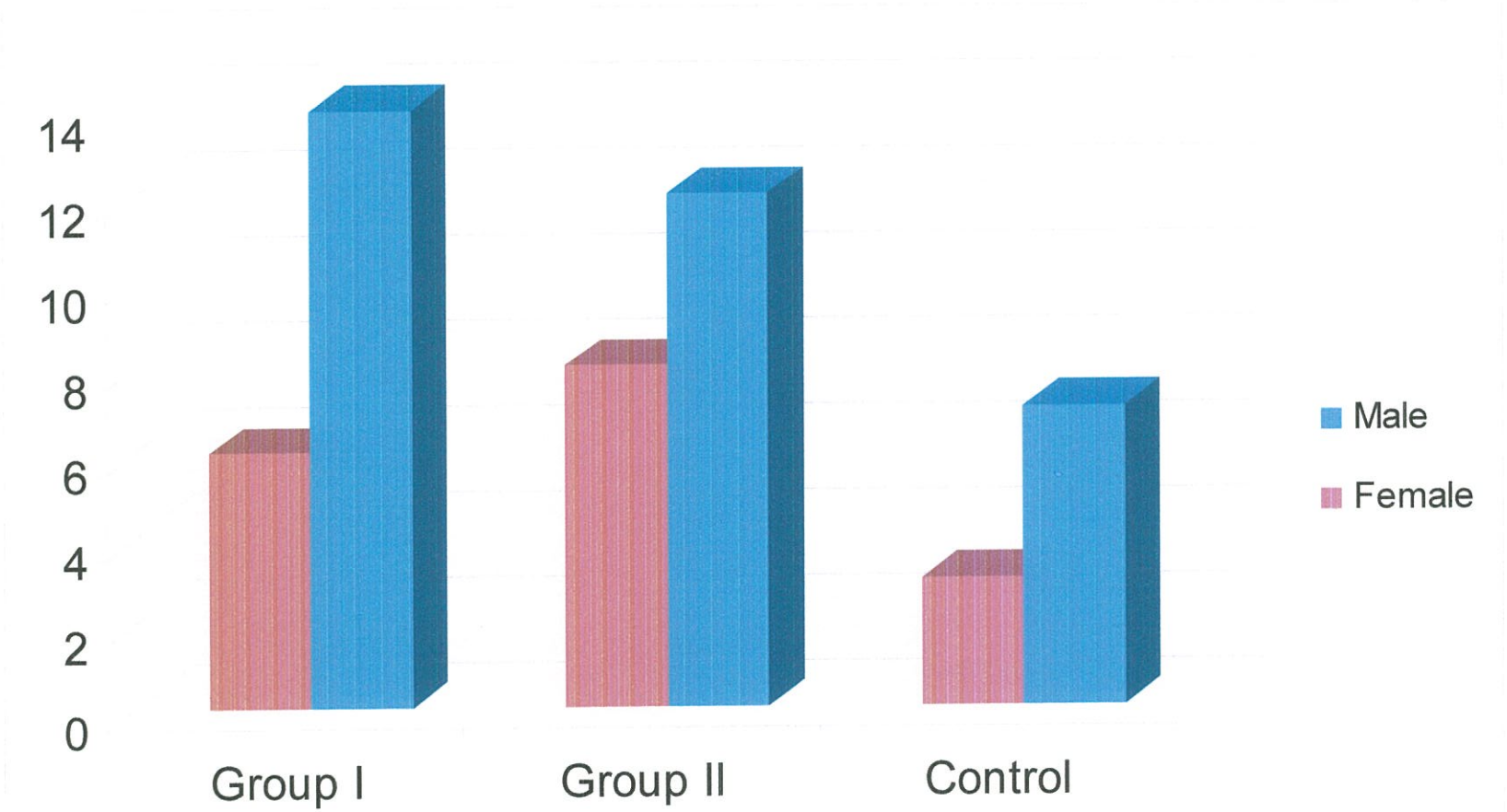


Table (15): Comparison between studied groups as regards postnatal age (days)

| | Group I (+ve blood culture) (N=20) | Group II (-ve blood culture) (N=20) | Control group (GroupIII) (N = 10) |
|---|---|---|---|
| • Mean | 7.1 | 6.1 | 6.7 |
| • ± SD | 3.3 | 2.07 | 2.5 |
| • F | 0.681 | | |
| • P | # 0.511 | | |

**± SD= Standard deviation**

**F=Fisher' Exact test**

**# Statistically insignificant**

**Fig3:Comparison between studied groups as regards postnatal age (days)**

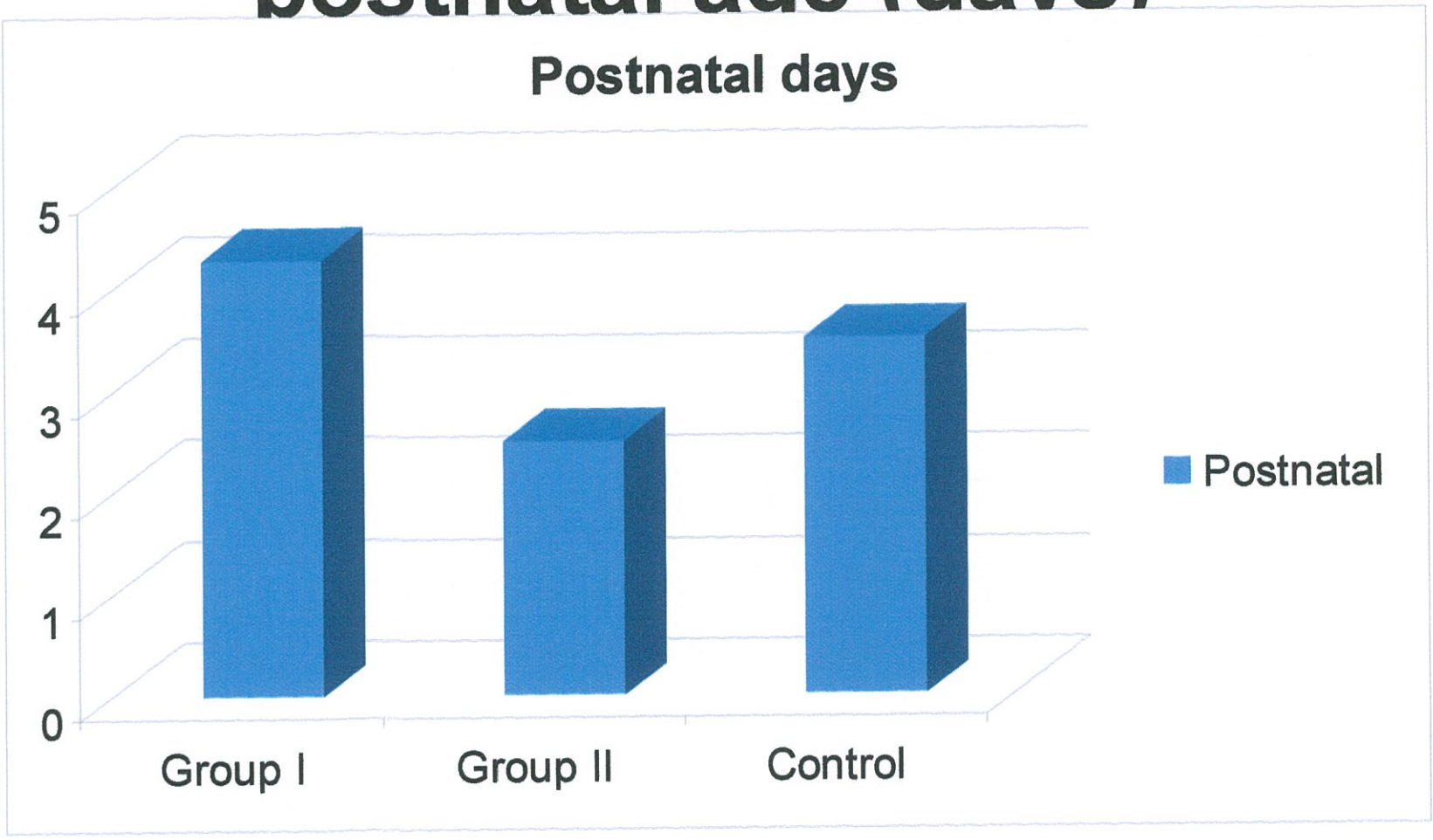


Table (16): Place of delivery of septic groups:

| Place of delivery | Group I (N = 20) | (%) | Group II (N=20) | % | X2 | P |
|---|---|---|---|---|---|---|
| Hospital | 16 | 80% | 17 | 85% | 0.173 | #1.0 |
| Home | 4 | 20% | 3 | 15% | | |

X2=Pearson chi-square

# Statistically insignificant

Table (17): Mode of delivery of septic groups

| Mode of delivery | Group I (N=20) | (%) | Group II (N=20) | % | X2 | P |
|---|---|---|---|---|---|---|
| Vaginal | 12 | 60% | 7 | 35% | 2.506 | #0.205 |
| Caesarian section | 8 | 40% | 13 | 65% | | |

X2=Pearson chi-square

# Statistically insignificant

Table (18): Antibiotic intake by septic groups.

| Antibiotic intake | GroupI (+ve blood culture) (N=20) | (%) | Group II (-ve blood culture) (N=20) | % | X2 | P |
|---|---|---|---|---|---|---|
| Number | 8 | 40% | 17 | 85% | 12.74 | *0.02 |

* Statistically significant

X2=Pearson chi-square

Table (19): Statistical analysis of risk factors of neonatal sepsis in septic groups

| Risk factors | Group I (+ve blood culture) (N=20) | % | Group II (-ve blood culture) (N= 20) | % | X2 | P |
|---|---|---|---|---|---|---|
| Umbilical catheter | 4 | 20% | 4 | 20% | 0.00 | #1.00 |
| Mech. ventilation | 9 | 45% | 6 | 30% | 0.96 | #0.514 |
| Intubations | 9 | 45% | 7 | 35% | 0.417 | #0.748 |
| PROM | 9 | 45% | 13 | 65% | 1.61 | #0.341 |
| Difficult labour | 14 | 70% | 15 | 75% | 0.125 | #1.00 |
| Mat. hypertension | 4 | 20% | 3 | 15% | 0.173 | #1.00 |
| Mat. antenatal. fever | 4 | 20% | 12 | 60% | 6.667 | *0.011 |
| T.P.N | 17 | 85% | 13 | 65% | 2.133 | #0.273 |
| Umbilical sepsis | 3 | 11% | 3 | 15% | 0.00 | #1.00 |

*** Statistically significant**

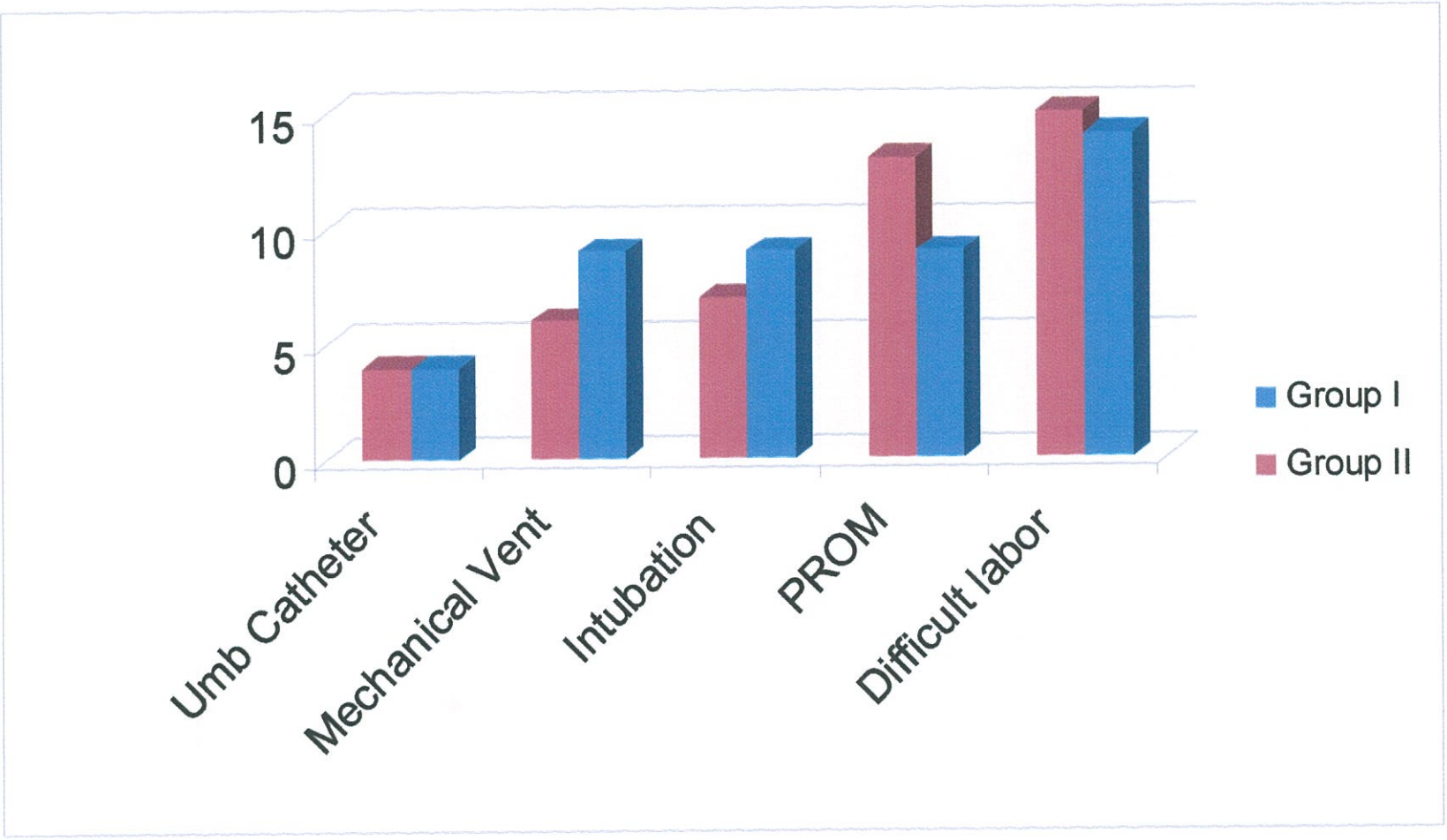
**# Statistically insignificant**

**X2=Pearson chi-square**

**PROM= premature rupture of membranes**

**T.P.N= total parental nutrition**

# Fig6:Risk factors of neonatal sepsis in septic groups



# Fig7:Risk factors of neonatal sepsis in septic groups

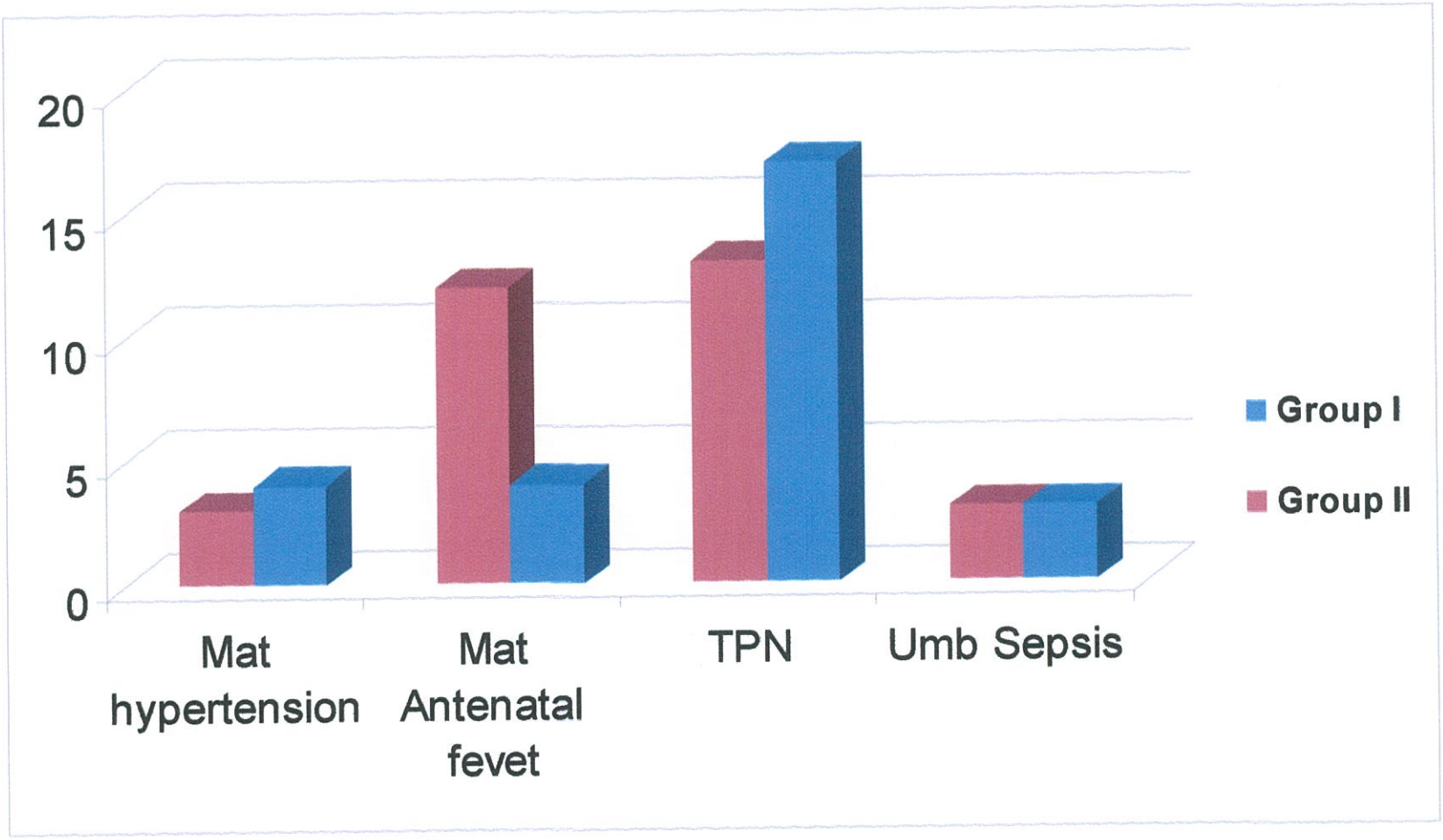


Table (20): Comparison between studied groups as regards growth parameters

| | Group I (+ve blood culture) (N = 20) | Group II (-ve blood culture) (N = 20) | Control group (GroupIII) (N=10) |
|---|---|---|---|
| • Head circumference (Cm) | | | |
| Mean ± SD | 31.3 1.34 | 30.95 1.39 | 30.3 1.45 |
| F P | 1.75 #0.184 | | |
| • Length (cm) | | | |
| Mean ± SD | 40.45 3.17 | 39.90 3.29 | 36.1 4.2 |
| F P | 5.74 #0.006 | | |
| • Birth Weight(gm) | | | |
| Mean ± SD | 1630.3 500.9 | 1513.5 580.8 | 1400.3 413.2 |
| F P | 0.688 #0.507 | | |

**# Statistically insignificant**

**± SD= Standard deviation**

**F=Fisher' Exact test**

Table (21): Comparison between septic groups as regards sepsis score level.

| Sepsis score level | Group I (+ve blood culture) (N=20) | % | Group II (-ve blood culture) (N=20) | % | X2 | L.R ratio | P |
|---|---|---|---|---|---|---|---|
| 0 | 0 | 0% | 0 | 0% | 12.55 | 14.67 | *0.002 |
| 1 | 0 | 0% | 0 | 0% | | | |
| 2 | 4 | 20% | 16 | 80% | | | |
| 3 | 7 | 35% | 3 | 15% | | | |
| 4 | 5 | 25% | 1 | 5% | | | |
| 5 | 4 | 20% | 0 | 0% | | | |

*Statistically significant

# Statistically insignificant

L.R ratio= likelihood ratio

X2=Pearson chi-square

Table (22): Comparison between septic groups as regard sepsis score

| | Group I (+ve blood culture) (N=20) | Group II (-ve blood culture) (N=20) |
|---|---|---|
| • Mean | 3.15 | 2.25 |
| • ± SD | 1.05 | 0.89 |
| T test | 10.58 | |
| P value | * 0.002 | |

***Statistically significant**

**± SD= Standard deviation**

Table (23): Statistical analysis of clinical manifestations of septic groups:

| Clinical manifestations | Group I (+ve blood culture) (N=20) | % | Group II (-ve blood culture) (N=20) | % | X2 | P |
|---|---|---|---|---|---|---|
| • Decreased capillary refilling time. | 12 | 60% | 18 | 90% | 0.028 | #0.65 |
| • Poor suckling. | 14 | 70% | 11 | 55% | 0.960 | #0.514 |
| • Poor Moro reflex. | 20 | 100% | 20 | 100% | 0.00 | #1.00 |
| • Lethargy. | 16 | 80% | 16 | 80% | 0.00 | #1.00 |
| • Irritability. | 4 | 20% | 4 | 20% | 0.00 | #1.00 |
| • Convulsions. | 12 | 60% | 6 | 30% | 3.636 | #0.111 |
| • Bulging anterior fontanel. | 2 | 10% | 2 | 10% | 0.00 | #1.00 |
| • Scleroderma. | 1 | 5% | 0 | 0% | 0.00 | #1.00 |
| • Hepatomegaly. | 2 | 10% | 4 | 20% | 0.784 | #0.661 |
| • Jaundice. | 11 | 55% | 14 | 70% | 0.960 | #0.514 |
| • Cyanosis. | 5 | 25% | 5 | 25% | 0.00 | #1.00 |
| • Abdominal distension. | 6 | 30% | 6 | 30% | 0.00 | #1.00 |
| • Crepitations. | 1 | 5% | 4 | 20% | 2.057 | #0.342 |
| • Murmurs. | 5 | 25% | 3 | 15% | 0.625 | #0.695 |

**# Statistically insignificant**

**X2=Pearson chi-square**

Table (24): Comparison between septic groups as regards muscle tone

| Risk factors | Group I (N=20) | % | Group II (N= 20) | % | X2 | P |
|---|---|---|---|---|---|---|
| Decreased | 8 | 40% | 6 | 30% | 2.901 | #0.234 |
| Normal | 4 | 20% | 9 | 45% | | |
| Increased | 8 | 40% | 5 | 25% | | |

Table (25): Comparison between studied groups as regards vital signs

| | Group I (+ve blood culture) (N = 20) | Group II (-ve blood culture) (N = 20) | Control group (GroupIII) (N=10) |
|---|---|---|---|
| • Temperature | | | |
| Mean ± SD | 37.2 0.8 | 37.3 0.9 | 36.9 0.37 |
| F | 0.908 | | |
| P | #0.410 | | |
| • Respiratory rate | | | |
| Mean ± SD | 54.8 12.6 | 67.2 7.8 | 47.9 7.4 |
| F | 14.63 | | |
| P | *0.00 | | |
| • Heart rate | | | |
| Mean ± SD | 173.6 13.9 | 180.6 15.06 | 151 17.9 |
| F | 12.84 | | |
| P | *0.00 | | |

***Statisticallysignificant**

**# Statistically insignificant**

**± SD= Standard deviation**

Table (26): Distribution of organisms isolated from blood culture in group I(+ve blood culture) (N=20)

| Organisms | No, | % |
|---|---|---|
| Enterobacter | 3 | 15% |
| E-Coli | 2 | 10% |
| Staph | 10 | 50% |
| Klebsiella | 5 | 25% |
| **Total** | **20** | **100** |

Table (27): Distribution of organisms isolated from urine culture in group I(+ve blood culture) (N=20).

| Organisms | No, | % |
|---|---|---|
| Staph | 1 | 5% |
| **Total** | **1** | **5%** |

Table (28): Distribution of organisms isolated from C.S.F culture in group I (+ve blood culture) (N=20).

| Organisms | No, | % |
|---|---|---|
| Klebsiella | 1 | 5% |
| **Total** | **1** | **5%** |

Table (29): Comparison between studied groups as regards lab. Investigations.

| | Group I (N = 20) | Group II (N = 20) | Control group III (N=10) |
|---|---|---|---|
| • **Total HB level (gm/dl)** | | | |
| Mean | 12.4 | 10.8 | 15.7 |
| ± SD | 2.6 | 2.7 | 1.11 |
| F | 12.6 | | |
| P | *0.000 | | |
| • **Total leucocytes count (X $10^3$/Cmm)** | | | |
| Mean | 14.9 | 11.7 | 7.05 |
| ± SD | 5.03 | 8.8 | 4.07 |
| F | 4.15 | | |
| P | *<0.05 | | |
| • **Bandemia (X $10^3$/Cmm)** | | | |
| Mean | 13.7 | 13.2 | 8 |
| ±SD | 6.3 | 6.8 | 4.5 |
| F | 3.120 | | |
| P | *<0.05 | | |
| • **Platelet count (X$10^3$/Cmm)** | | | |
| Mean | 128.7 | 146.6 | 293 |
| ±SD | 84 | 44.5 | 88.4 |
| F | 18.9 | | |
| P | *0.00 | | |

***Statistically significant**

**±SD=Standarddeviation**

**F=Fisher' Exact test**

# Fig3:Comparison between studied groups as regard lab. Investigations.

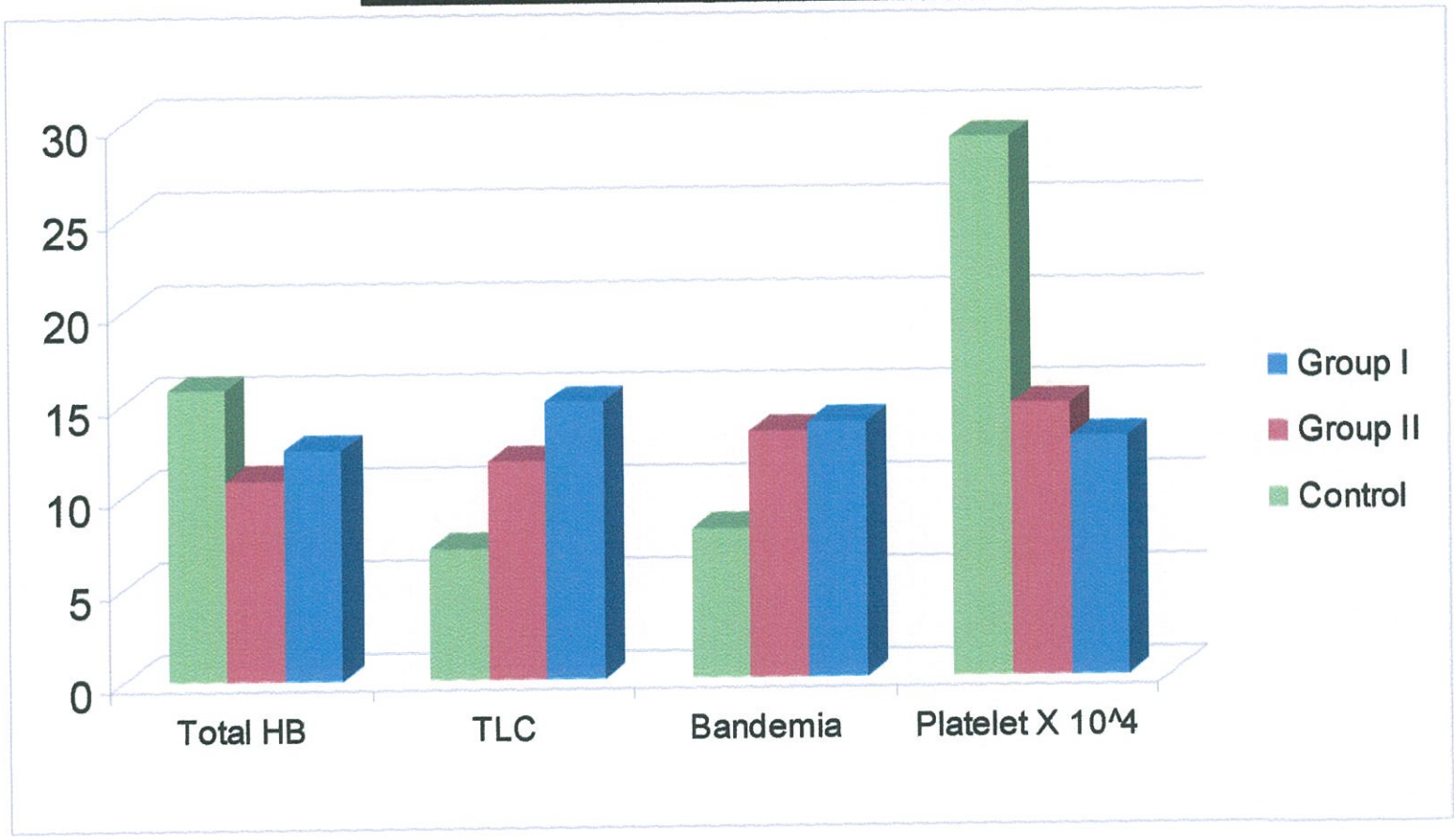


Table (30): Comparison between studied groups as regards CRP

| | Group I (+ve blood culture) (N=20) | Group II (-ve blood culture) (N=20) | Control group (Group III) (N = 10) |
|---|---|---|---|
| • Mean<br>• ± SD | 131.5<br>52.2 | 109.4<br>67.5 | 8.5<br>2.9 |
| • F<br>• P | 15.8<br>*0.0001 | | |

*Statistically significant

± SD= Standard deviation

F=Fisher' Exact test

Table (31): Comparison between septic groups as regard CRP.

| | Group I (+ve blood culture) (N=20) | Group II (-ve blood culture) (N=20) |
|---|---|---|
| • Mean<br>• ± SD | 131.5.1<br>52.2 | 109.4<br>76.5 |
| • F<br>• P Value | 251<br># 0.767 | |

# Statistically insignificant

± SD= Standard deviation

F=Fisher' Exact

Table (32): Comparison between studied groups as regard PCT-Q test.

| | Group I (+ve blood culture) (N=20) | Group II (-ve blood culture) (N=20) | Control group (Group III) (N = 10) |
|---|---|---|---|
| • Mean<br>• ± SD | 3.15<br>0.75 | 3.25<br>0.64 | 0.49<br>0.01 |
| • F<br>• P | 49.85<br>*0.001 | | |

*Statistically significant

± SD= Standard deviation

F=Fisher' Exact test

Table (33): Comparison between septic groups as regard PCT-Q test

| | Group I (+ve blood culture) (N=20) | Group II (-ve blood culture) (N=20) |
|---|---|---|
| • Mean<br>• ± SD | 3.15<br>0.75 | 3.25<br>0.64 |
| • F<br>• P | 1.454<br>#0.693 | |

# Statistically insignificant

± SD= Standard deviation

F=Fisher' Exact test

# Fig9 :Comparison between studied groups as regard CRP,PCT and sepsis score.

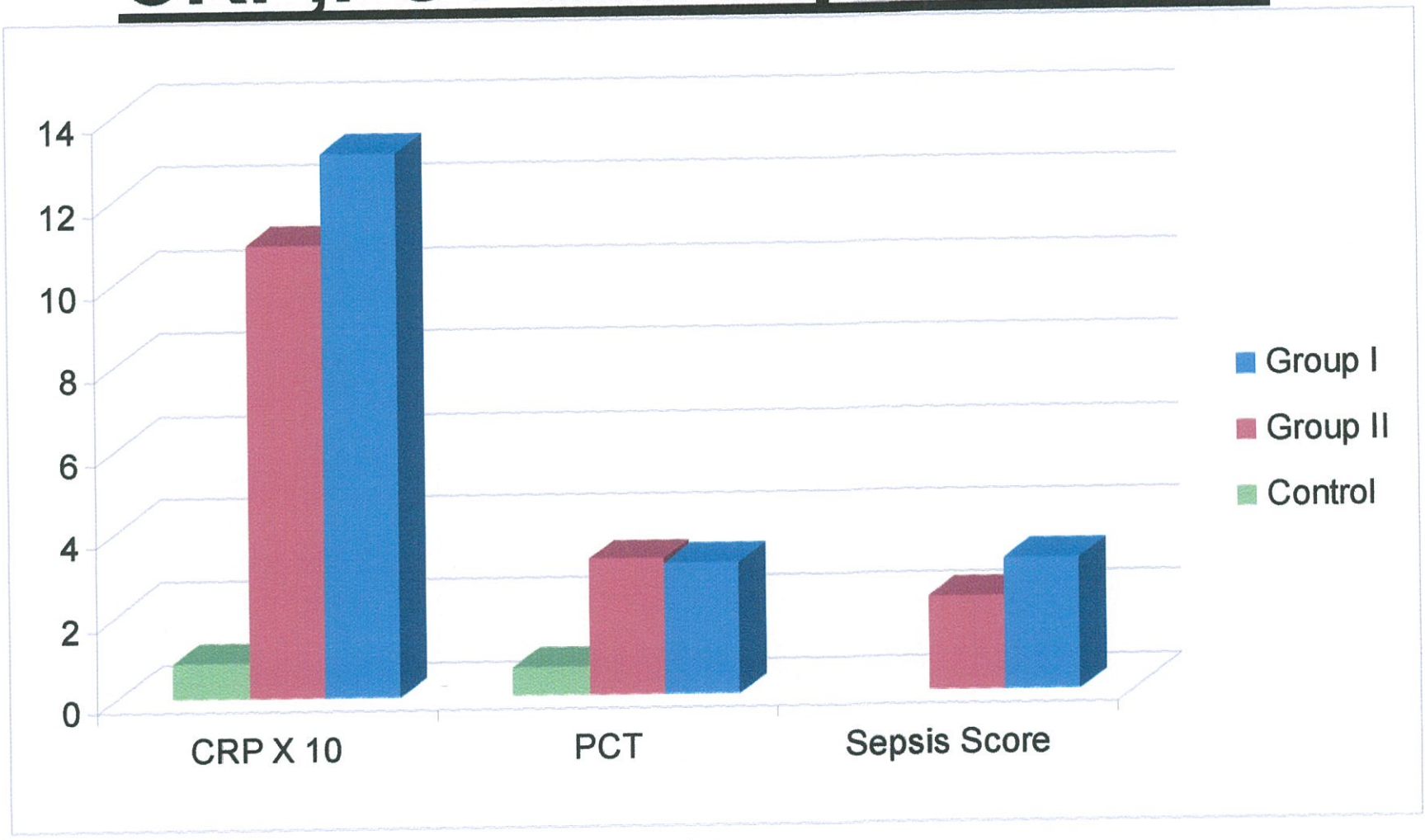


Table (34): PCT-Q test results distribution in septic groups

| PCT-Q test results ng/ml | Group I (+ve Blood culture) (N=20) | % | Group II (-ve blood culture) (N=20) | % | $X^2$ | P |
|---|---|---|---|---|---|---|
| < 0.5 | 1 | 5% | 0 | 0% | | |
| 0.5-2 | 1 | 5% | 2 | 10% | 1.454 | #0.693 |
| 2-10 | 12 | 60% | 11 | 55% | | |
| > 10 | 6 | 30% | 7 | 35% | | |

# Statistically insignificant

X2=Pearson chi-square

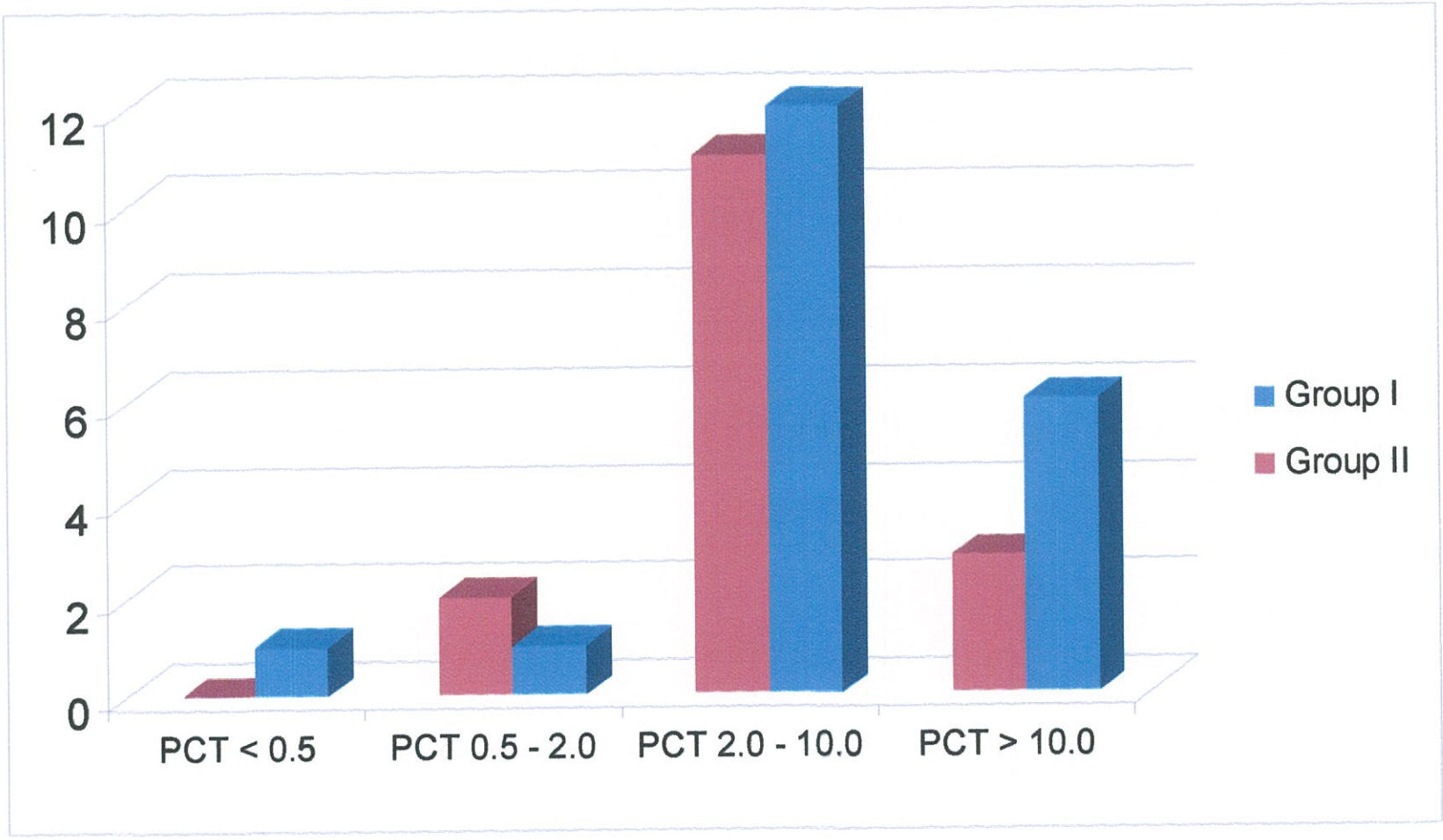
Table (35): Comparison between septic groups as regard Chest-X-rays and Electrocardiogram abnormalities.

| | Group I (+ve blood culture) (N=20) | % | Group II (-ve blood culture) (N=20) | % | $X^2$ | P |
|---|---|---|---|---|---|---|
| • Chest x-rays. | 3 | 15% | 4 | 20% | 0.173 | #1.000 |
| • ECG | 3 | 15% | 3 | 15% | 0.00 | #1.000 |

# Statistically insignificant

X2=Pearson chi-square

# Fig10:PCT-Q test results distribution in septic groups



Table(36):Pearson correlation co-efficient between birth weight and gestational age versus CRP and PCT.

| | birth weight | | gestational age | |
|---|---|---|---|---|
| | r | P | r | P |
| CRP | -0.042 | #0.799 | -0.064 | #0.693 |
| PCT | -0.195 | #0.229 | -0.108 | #0.506 |

r =Pearson correlation co-efficient

# No statistically significant correlation between birth weight and gestational age versus CRP and PCT.

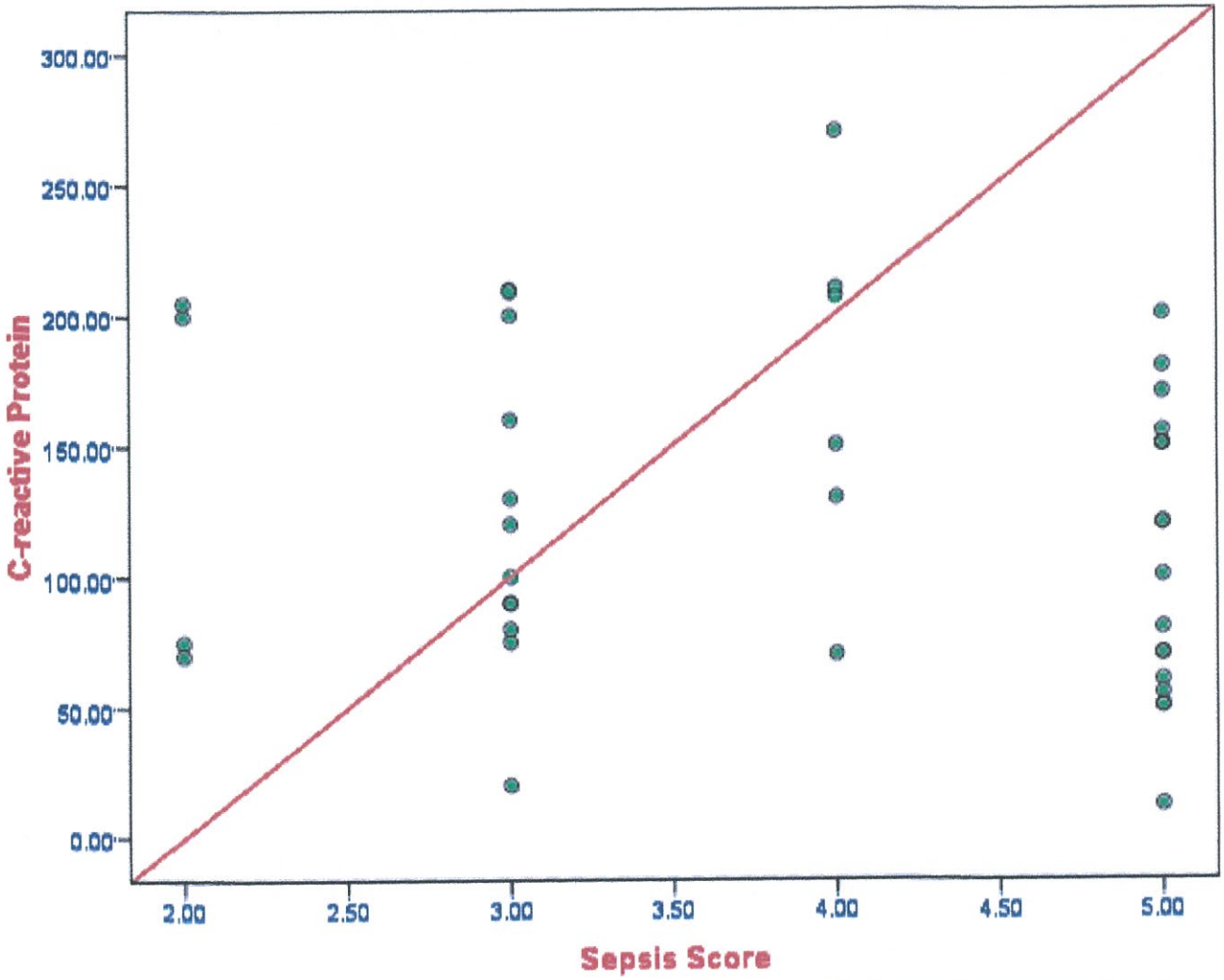
Table (37)Pearson correlation co-efficient between Sepsis score versus CRP and PCT.

| | r | P |
|---|---|---|
| CRP | 0.14 | *0.03 |
| PCT | 0.32 | *0.04 |

r =Pearson correlation co-efficient

* There's statistically significant positive correlation between sepsis score and both PCT and CRP($P<0.05$).

# Fig 1.1 Pearson correlation coefficient between Sepsis score and CRP



# Fig 12: Pearson correlation coefficient between Sepsis score and PCT.

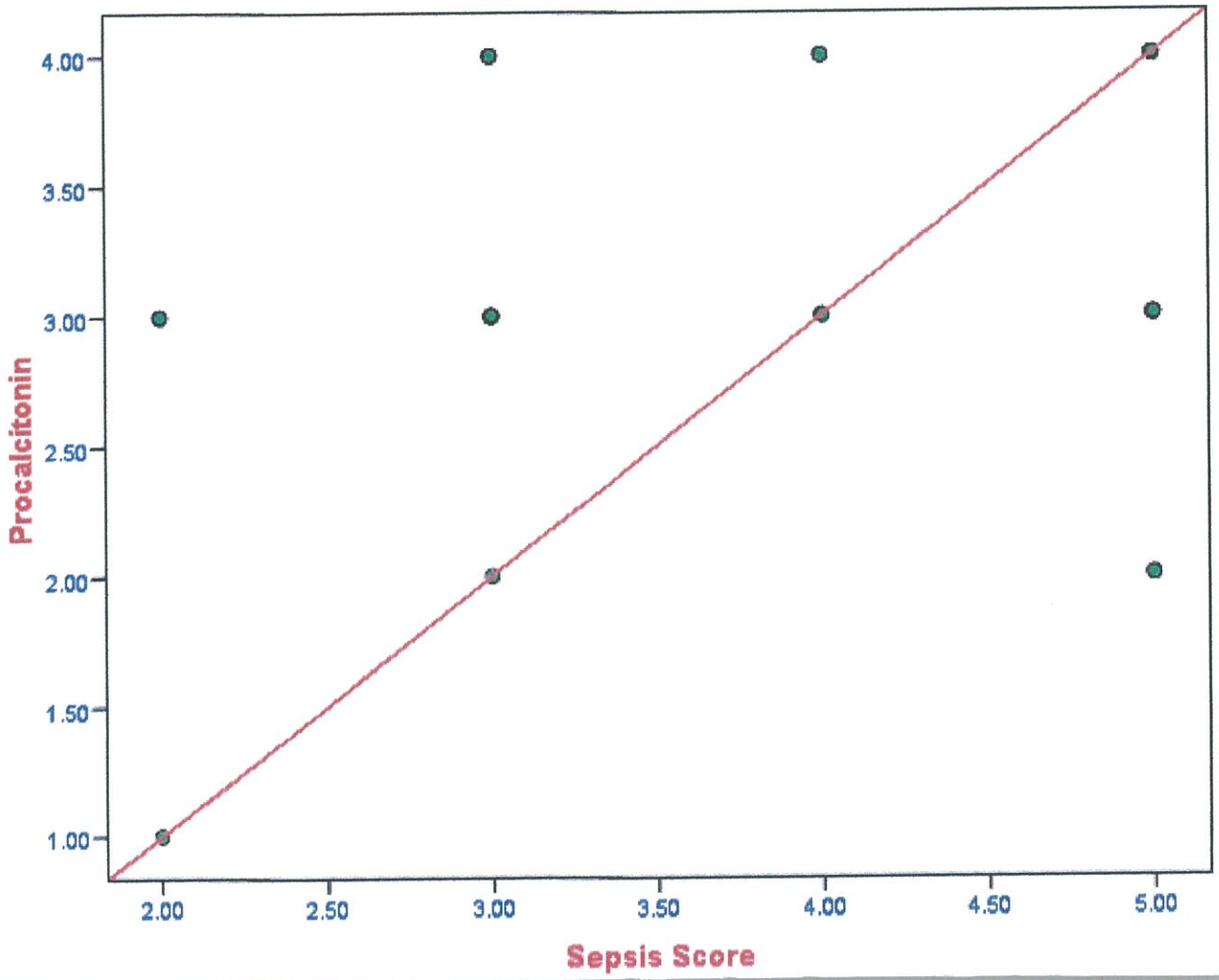


Table (38):Pearson correlation co-efficient between PCT and laboratory data(platelets count ,TLC ,Hb. level and bandaemia)

| | r | P |
|---|---|---|
| Platelets count | -0.021 | #0.89 |
| Total leukocyte count | 0.124 | #0.44 |
| Hb.level | -0.404 | #0.09 |
| Bandaemia | 0.121 | #0.45 |

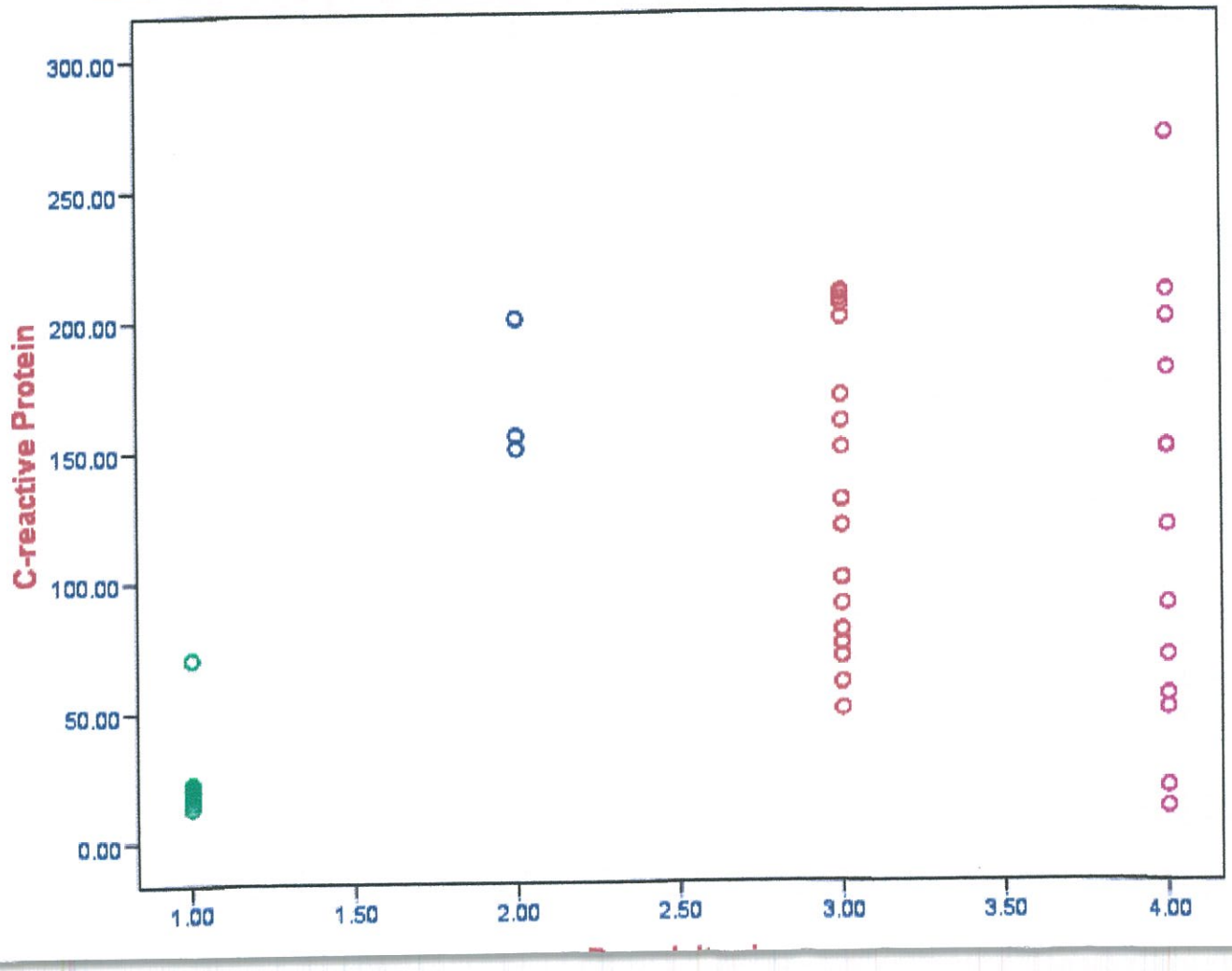
r =Pearson correlation co-efficient
# No statistically significant correlation between PCT and (Platelets count , Hb. level , total leukocyte count and bandaemia) ($p<0.05$).

Table(39):Pearson correlation co-efficient between CRP and PCT value in septic groups I and II (N=40)

| Group | Number | r | P |
|---|---|---|---|
| All cases | 40 | 0.64 | *0.002 |

r =Pearson correlation co-efficient
*Statistically significant positive correlation between CRP and PCT($p<0.05$).

# Fig13:Pearson correlation co-efficient between CRP and PCT value in septic groups



Table(40) Percentages of sensitivity specificity, positive predictive value(ppv) negative predictive value(npv) of PCT-Q test, CRP and( PCT and CRP) results

| | sensitivity | specificity | positive predictive value | negative predictive value |
|---|---|---|---|---|
| PCT-Q test | 97.5 | 90 | 97.5 | 90 |
| CRP | 92.5 | 80 | 92.5 | 80 |
| PCT-Q test and CRP | 90 | 100 | 100 | 71.4 |

Table (41): Comparison between survivors and non survivors as a regard PCT-Q test

| | Survivors (N-22) | Non Survivors (N=28) |
|---|---|---|
| • Mean<br>• ± SD | 5.12<br>2.12 | 8.26<br>1.85 |
| • X2<br>• P Value | 10.96<br>*0.02 | |

***Statistically significant**

**± SD= Standard deviation**

**X2=Pearson chi-square**

Table (42):relation between PCT-Q test results and survival% in studied groups

| PCT-Q test results ng /ml | survivor (N=22) | % | Non-survivors (N- 28) | % | $X^2$ | P |
|---|---|---|---|---|---|---|
| < 0.5(n=11) | 7 | 31.81 | 3 | 10.71 | | |
| 05-2(n=3) | 1 | 4.54 | 3 | 10.71 | 10.96 | *0.02 |
| 2-10(n=23) | 8 | 36.36 | 15 | 53.57 | | |
| > 10(n=13) | 6 | 27.27 | 7 | 25 | | |

*Statistically significant

X2=Pearson chi-square

Table (43): Outcome of septic groups.

| Outcome | GroupI (+ve blood culture) (N=20) | (%) | Group II (-ve blood culture (N=20) | % | X2 | P |
|---|---|---|---|---|---|---|
| Cured | 8 | 40% | 7 | 35% | 0.107 | # 1.0 |
| Died | 12 | 60% | 13 | 65% | | |

X2=Pearson chi-square

# Statistically insignificant

# ANALYSIS OF THE RESULTS

1-The sex distribution in studied groups shows that, the male cases represented 70% (14/20) of group I, 60% (12/20) of group II and 70% (7/10) of control group. While female cases represented 30% (6/20) of group I, 40% (8/20) of group II and 30% (3/10) of control group. The M/F ratio in group I = 2.3, M/F ratio in group II=1.5, while M/F ratio in control group 2.3, with statistically insignificant difference between septic groups and control group ($P > 0.05$), as shown in table No, 13 and fig No. 1 respectively.

2- The comparison between the studied groups as a regard gestational age shows that, the mean age (weeks) (31.6 $\pm$ 2.99w), (31 + 2.82 w) and (31.2 $\pm$ 1.75w) for septic groups I and II and control group respectively, with statistically insignificant difference between the three groups ($P > 0.05$), as shown in table No.14.

3-The comparison between studied groups as a regard postnatal age in days shows that, the mean age (days) (7.1 $\pm$ 3.3 day), (6.1 $\pm$ 2.07 day) and (6.7 $\pm$ 2.5 day) for septic group I and II and control group respectively, with statistically insignificant difference between the three groups ($P > 0.05$), as shown in table No.15 and fig. No. 2 respectively.

4- In the present study, we found that the place of delivery of septic groups, was 80% (16/20) of group I were delivered in hospital and 20% (4/20) were delivered at home, while 85% (17/20) of group II were delivered in hospital and 15% (3/20) were delivered at home, with statistically insignificant difference between the two septic groups ($P > 0.05$) as shown in table No.16.

5-Also the mode of delivery of septic groups, was 60% (12/20) of group I were delivered by vaginal delivery and 40% (8/10) of group I were delivered by caesarian section, while 35% (7/20) of group II were

delivered by vaginal delivery and 65% (13/20) of group II were delivered by caesarian section, with statistically insignificant difference between the two septic groups ($P > 0.05$), as shown in table No,17.

6- The comparison between the two septic groups I and II as a regard history of antibiotics intake by mothers antenatally or by babies before sample intake shows that, 40%(8/20) of group I and 85%(17/20)of group II give history of antibiotics intake by mothers antenatally or by babies before sample intake with statistically significant difference between the two groups($P<0.05$).The incidence in group II> group I, as shown in table No.18.

7-The statistical analysis of the risk factors of neonatal sepsis in septic groups shows that, total parental nutrition was represent in 85% (17/20) in group I and 13% (65/20) of group II, difficult labour was represent in 70% (14/20) in group I and 75% (15/20) in group II, mechanical ventilation was represent in 45% (4/20) in group I and 30% (6/20) in group II, endotracheal intubations was represent in 45% (9/20) in group I and 65% (13/20) in group II, maternal hypertension was represent in 20% (4/20) in group I and 15% (3/20) in group II, maternal antenatal fever 20% (4/20) in group I and 60% (12/20) in group II, umbilical catheterization was represent in 20% (4/20) in group I and 20% (4/20) in group II, umbilical sepsis was represent in 15% (3/20) in group I and 15% (3/20) in group II, with statistically insignificant difference between the two septic groups I and II in all risk factors expect in maternal antenatal fever, where there is statistically significant difference between the two groups($p<0.05$), as shown in table No.19and fig. No.3and 4 respectively.

8-The comparison between the studied groups as regard growth parameters shows that, the mean head circumference(cm) was (31.3 ± 1.34 cm), (30.9 ± 1.39cm) and (30.3 ± 1.42 cm) for septic groups I and II and control group respectively, with statistically insignificant difference between the three groups ($P > 0.05$). The mean length (cm) (40.4 ± 3.1cm) (39.9±3.2 cm) and (36.1 ± 4.2cm) of septic groups I and II and control group respectively, with statistically insignificant difference between the three groups ($P > 0.05$). The mean birth weight (grams) (1630.3 ± 500.9 gm), (1513.5 ± 580.8 gm) and (1400 ± 413) for septic groups I and II and control group respectively, with statistically insignificant difference between the three groups ($P > 0.05$), as shown in table No. 20.

9- The comparison between septic groups I and II as a regard sepsis score level shows that, 0% (0/20) of septic groups I and II respectively with sepsis score (0) and(1), 20% (4/20)and 80% (16/20) of septic groups I and II respectively have septic score (2), 35% (7/20)and 15% (3/20) of septic groups I and II respectively have sepsis score (3), 25% (5/20)and 5% (1/20) of septic groups I and II respectively, have septic score (4) and 20% (4/20)and 0% (0/20) of septic groups I and II respectively, have septic score (5) with statistically significant difference between the septic groups I and II ($P < 0.05$), as shown in table No.21.

10-The comparison between the septic groups I and II as a regard sepsis score shows that, the mean sepsis score in septic group I (3.45 ± 1.05) is statistically significant higher than the mean sepsis score in septic group II (2.25 ± 0.89) ($P < 0.05$), as shown in table No.22and fig. No.6.

11-The statistical analysis of the clinical manifestations of septic groups I and II shows that, 100% (20/20) of group I and 100% (20/20) of group II presented with poor more reflex, 80% (16/20) of group I and

80% (16/20) of group II presented with lethargy, 70% (14/20) of group I and 55% (11/20) of group II presented with poor suckling, 60% (12/20) of group I and 90% (18/20) of group II presented with decreased capillary refilling time, 60% (12/20) of group I and 30% (6/20) of group II presented with convulsions, 55% (11/20) of group I and 70% (14/20) of group II presented with Jaundice, 30% (6/20) of group I and 30% (6/20) of group II presented with abdominal distension, 25% (5/20) of group I and 15% (3/20) of group II presented with murmurs, 25% (5/20) of group I and 25% (5/20) of group II presented with cyanosis, 10% (2/20) of group I and 20% (4/20) of group II presented with hepatomegaly, 10% (2/20) of group I and 10% (2/20) of group II presented with bulging anterior fontanel, 5% (1/20) of group I and 20% (4/20) of group II presented with crepitations, 5% (1/20) of group I and 0% (0/20) of group II presented with scleroderma, with statistically insignificant difference between the two groups as a regard the clinical manifestations ($P > 0.05$), as shown in table No. 23.

12-The comparison between the septic groups I and II as a regard muscle tone shows that, 40% (8/20) of group I and 30% (6/20) of group II presented with decreased muscle tone, 20% (4/20) of group I and 45% (9/20) of group II presented with normal muscle tone and 40% (8/20) of group I and 25% (5/20) of group II presented with increased muscle tone, with statistically insignificant difference between the two group ($P > 0.05$), as shown in table No.24.

13-The comparison between the studied groups as a regard the vital signs shows that, the mean temperature degree was ($37.2 \pm 0.8^{o}C$), ($37.2 \pm 0.9^{o}C$) and ($36.9 \pm 0.37^{o}C$) in septic groups I and II and control group respectively, with statistically insignificant difference between the three groups ($P > 0.05$). The mean heart rate was ($173.6 \pm 13.9$ beat/min), ($180.6 \pm 150.06$ beat/min) and ($151 \pm 17.9$ beat/min) for septic group I

and II and control group respectively, with statistically significant difference between the three groups ($P < 0.05$). The mean respiratory rate was (54.8 ± 12.6/min), (67.2 ± 7.8/min) and (47.9 ± 7.4/min) for septic groups I and II and control group respectively, with statistically significant difference between the three groups ($P < 0.05$), as shown in table No.25.

14- The distribution of organisms isolated from blood culture in septic group I (culture-proven sepsis) shows that, Staphylococci was isolated from 50% (10/20) of cases, klebsiella was isolated from 25% (5/20) of cases, Enterobacter was isolated from 15% (3/20) of cases and E-coli was isolated from 10% (2/20) of cases, as shown in table No.26 .

15-The distribution of organisms isolated from urine culture in septic group I (culture-proven sepsis) shows that, only one organism was isolated from one neonate which were Staphylococci 5% (1/20), as shown in table No.27.

16- The distribution of organism isolated from C.S.F. culture in septic group I (culture-proven sepsis), shows that, only one organism was isolated from one neonate which was Klebsiella 5% (1/20), as shown in table No. 28 .

17- The comparison between the studied groups as a regard laboratory investigations shows that, the mean Hb. level was (12.4±2.6 gm/dl), (10.8 ± 2.7gm/dl) and (15.7 ± 1.11 gm/dl) in septic groups( I and II) and control group respectively, with statistically significant lower Hb. level the septic groups (I and II) than the control group ($P < 0.05$). The mean total leukocytic count was (14.9± 5.03 $x10^3/mm^3$), (11.7 ± $8.8x10^3/mm^3$) and (7.05 ± 4.07 $X10^3/mm^3$) in septic groups (I and II )and control group respectively, with statistically significant higher level in the septic groups (I and II) than the control group ($P> 0.05$). The mean bandemia was (13.7 ± 6.3 x $10^3/mm^3$), (13.2 ± 6.8 X $10^3/ mm^3$) and

($1.5\pm0.5$ $x10^3/mm^3$) in septic groups (I and II) and control group respectively with statistically significant higher level in septic groups (I and II) than the control group ($P < 0.05$). The mean platelets count was ($128.7 \pm 84$ $x10^3/mm^3$), ($146.6 \pm 44.5$ $x10^3/mm^3$)/ and ($293 \pm 88.4$ $x10^3/mm^3$) in septic groups I and II and control group respectively with statistically significant lower level in the septic groups(I and II )than the control group ($P < 0.05$), as shown in table No.29and fig. No.5.

18- The comparison between the studied groups as a regard C.R.P. shows that, the mean CRP was ($131.5 \pm 55.2$ gm/dl), ($109 \pm 67.5$gm/dl) and ($8.5 \pm 2.9$ gm/dl) in septic groups (I and II) and control group respectively, with statistically insignificant difference between group I and group II ($P > 0.05$) but statistically significant higher level in septic groups I and II than the control group ($P < 0.05$), as shown in table No.30,31 respectively and fig. No.6.

19-The comparison between studied groups as a regard PCT-Q test results shows that, the mean PCT-Q was ($3.15 \pm 7.5$ ng/ml), ($3.25 \pm$ 0.64ng/ml) and ($0.69 \pm 0.01$ng/ml) for the septic groups (I and II) and control group respectively, with statistically significant higher level in septic groups (I and II) than the control group ($P < 0.05$) but statistically insignificant difference between the two septic groups I and II ($P > 0.05$), as shown in table No.32,33 respectively and fig .No.6.

20- The distribution of PCT-Q test results in the two septic groups I and II, where 5% (1/20) and 0% (0/20) of group I and II respectively had PCT-Q test results < 0.5 ng/ml, 5% (1/20) and 10% (2/20) of group I and group II respectively had PCT-Q test results 0.5-2ng/ml, 60% (12/20) and 55% (11/20) of group I and II respectively had PCT-Q test result 2-10ng/ml, 30% (6/20) and 35% (7/12) of group I and II respectively, had PCT-Q test result >10ng/ml, with statistically insignificant difference between the two groups ($P > 0.05$), as shown in table No.34and fig. No.7.

21-The comparison between the two septic groups I and II as a regard chest X-rays and electrocardiogram abnormalities shows that, 15% (3/20) of group I had abnormal chest X-rays while 20% (4/20) of group II had abnormal X-rays, with statistically insignificant difference between the two septic group ($P > 0.05$). While 15% (3/20) of group I had abnormal electrocardiogram and 15% (3/20) of group II had abnormal electrocardiogram, with statistically insignificant difference between the two septic groups ($P > 0.05$), as shown in table No.35.

22- The analysis of the correlation between both birth weight and gestational age versus CRP and PCT shows that, both birth weigh and gestational age did not correlate with CRP (r=- 0.042 and- 0.064) for both birth weight and gestational age respectively ($p>0.05$), and no correlation between both birth weight and gestational age versus PCT(r=- 0.195 and- 0.506) for both birth weight and gestational age respectively ($p>0.05$),as shown in table No.36 .

23- The analysis of the correlation between sepsis score and both CRP and PCT shows that a significant +ve Pearson correlation co-efficient (r) between sepsis score and CRP(r=0.14) and ($p<0.05$) and a significant +ve Pearson correlation Co-efficient (r) between sepsis score and PCT (r=0.32) and ($p<0.05$), as shown in table No.37and fig. No.8 and 9 respectively.

24-The analysis of the correlation between PCT and others lab. data shows that Hb. Level, platelets count, total leukocyte count and bandaemia show statistically insignificant correlation with the PCT level (pearson correlation co-efficient (r)= - 0.021, - 0.404, 0.124 and 0.121) for Hb. Level , platelets count, total

leukocyte count and bandaemia respectively ($p>0.05$) ,as shown in table No. 38.

25_-The analysis of the correlation between CRP and PCT values in septic groups I and II shows that, a significant+ve Pearson correlation co-efficient (r) between CRP and PCT values in septic groups ($r=0.64$) and ( $p<0.05$), as shown in table No.39 and fig. No.10.

26-The comparison between studied groups as regard sensitivity, specificity, positive predictive value (ppv) , negative predictive value (npv) of PCT-Q test ,CRP and both (PCT-Q and CRP) in sepsis detection shows that, about 97.5% (39/40) of septic groups I and II with PCT-Q test > 0.5ng/ml (+ve test) and 92.5% (37/40) with CRP > 10mg/L (+ve test) versus10%(1/10) of control group with PCT-Q test >0.5ng/ml and 20% (2/10) with CRP >10mg/L while 2.5 ( 1/40) of septic group I and II with PCT-Q test <0.5ng/ml (- ve test) and 7.5 %(3/40) with CRP <10mg/L (- ve test) versus 90% (9/10) of control group with PCT-Q test <0.5ng/ml and 80% (8/10) with CRP <10mg/L.With PCT-Q test sensitivity(97.5%) specificity (90%), positive predictive value (ppv) (97.5%) and negative predictive value (npv) (90%) and CRP sensitivity (92.5%) specificity (80%), positive predictive value (ppv) (92.5%) and negative predictive value (npv) (80%). When both PCT-Q test and CRP used together only 90%(36/40) of septic group I and II give PCT-Q test >0.5ng/ml and CRP > 10mg/L L (+ve test) and 10% (4/40) give PCT-Q test <0.5ng/ml and CRP <10mg/L L (-ve test) versus 0% (0/40) of control group give PCT-Q test >0.5ng/ml and CRP >10mg/L and 100% (10/10) of control group give PCT-Q test <0.5ng/ml and CRP <10mg/L with decrease of sensitivity to(90%)and NPV to(71.4) but specificity and

PPV increase to 100% for both PCT-Q test and CRP ,as shown in table No.40.

27-The comparison between survivors and non survivors as a regard PCT-Q test results shows that, the mean PCT-Q test was (5.12±2.12ng/ml) and (8.26±1.85 ng/ml) in both survivors and non survivors respectively, with statistically significant higher level in non survivors than survivors ($P < 0.05$), as shown in table No.41.

28- The relation between PCT-Q test results and survival percentage in studied groups shows that, The PCT-Q negative results is more in the survivors (31.81%) than in the non- survivors (10.71) while the PCT-Q positive results is more in the non survivors (89.29%) than in the survivors (68.19%) with statistically significant different PCT-Q test results in survivors and non survivors ($p<0.05$), as shown in table No.42.

29-The comparison between the outcome of septic groups I and II shows that, 40% (8/20) of group I were cured while 60% (12/20) were died. While 35% (7/20) of group II were cured and 65% (13/20) were died with statistically insignificant difference between the two groups ($p<0.05$), as shown in table No.43.