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& Scientific Research
AL-Muthanna University
College of Science
Department of Biology



Study of *Streptococcus agalactiae* colonization in
Pregnant woman and its susceptibility to some
Antibiotics and medicinal plants extracts in
Al-Muthanna province

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Abstract

Streptococcus agalactiae is one of the most important causal agents of serious neonatal infections. Early detection of perinatal rectovaginal carriage of *Group B Streptococcus* (GBS) is important in the prevention of newborn infections.

To evaluate the prevalence of *group B Streptococcal* (GBS) colonization among pregnant women in Al-muthanna province. Also to determine the susceptibility pattern of GBS isolates against different antimicrobial agents and medicinal plants . In addition to investigate possible risk factors for GBS colonization.

Two hundreds and sex rectovaginal swabs collected from pregnant women from Women and Children Hospital and Al-Rummaitha General Hospital, Samples were taken from three periods of pregnancy, the first period ranged between 35-37 gestational age, the second period was ≤ 35 weeks of gestational age, and the third period was ≥ 37 weeks. Samples were taken according to the ages of pregnant women in two periods ≤ 25 years , while for the second group > 25 years, Antimicrobial susceptibility testing (AST) was performed according to CLSI guidelines on 42 GBS isolates using clindamycin, erythromycin, penicillin G, tetracycline and vancomycin, and used two types of medical plants (*Bauhinia variegata* and *Artemisia herba-alba*) were used with different concentrations of 9 concentrations (0.781 mg/ml, 1.65mg/ml, 3.125mg/ml, 6.25 mg/ml, 12.5mg/ml, 25mg/ml, 50 mg/ml, 100mg/ml, 200 mg/ml).

Present results showed the high rate of infection in 35-37 weeks of gestational ages (46.11%), the pregnant woman in less than 25 high infections by *Streptococcus agalactiae* (49.51%), antibiotic sensitivity test was conducted for all *Streptococcus agalactiae* isolates using 5 antibiotics. The results showed that the sensitivity to penicillin was 76%, while vancomycin (57%), while the resistance to antibiotics was tetracyclin, with the highest resistance

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rate, was 69%, followed by Clindamycin at 45%, and erythromycin Resistance was 42%, penicillin 38% resistance, and Vancomycin 21% resistance and

The results showed a high significant increase ($P < 0.05$) in the inhibition zone with an increased concentration of the extract in the growth of *Streptococcus agalactiae* where the concentration of 200 mg/mL was the most inhibitory for growth compared to the other concentrations of both extracts.

present results showed high prevalence of GBS in Al-muthanna province , penicillin was the most effective antibiotic against GBS isolates. And Medicinal plans (*Artemisia herba-alba*, *Bauhinia variegata*) have shown great efficiency in inhibiting bacterial growth *Streptococcus agalactiae*