ID: 1893

Congress: The First International Congress of Medical Bacteriology

Title: The Study of antibacterial effect of Golpar extracts on antibiotic-resistant bacteria

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Abstract: Background and objectives:
In spite of discovery of different antibiotics, the problem of the bacterial resistance still exists and made it necessary to do more medical researches to replace these chemical medicines. Golpar named scientifically "Heracleum persicum" grows in high and wet areas of Iran. It is used as anti-pain, anti-inflammation and anti-convulsion in traditional and local medicine. The study was done to find the antibacterial effects of different parts of this plant over a large group of antibiotic-resistant bacteria.

Materials and methods:
After collecting the different parts of Golpar (root, stem, leaf, ripe and green fruits), their methanol extractions were prepared by the way of wetting. The bacterial suspension of staphylococcus aureus, klebsiella pneumonia, pseudomonas aeruginosa, enterococcus, shigella, salmonella B & C & D were adjacent by the way of serial dilution with dilutions of 1.25 to 1.6400 of extraction in micro plates and then extraction's MIC and MBC were detected. The Amicasin and Chloramphenicol antibiotics were used as references.

Results:
The result shows that the most inhibiting effect is related to root, leaf and ripe fruit extractions. The best MIC of Golpar for klebsiella pneumonia was in concentration of 2.5 mg/ml, for staphylococcus aureus 0.6 mg/ml, for pseudomonas aeruginosa 2.5 mg/ml, for enterococcus 10 mg/ml, for shigella 1.25 mg/ml, for Salmonella group B and C 2.5 mg/ml and for Salmonella group D 1.25 mg/ml. Among the five Golpar extractions, the most effective antibacterial features are related respectively to leaf, green fruit, ripe fruit, root and stem. Among the 8 bacterial samples, the most sensitive bacteria to Golpar is staphylococcus aurous with MIC=0.6 mg/ml and MBC=1.25 mg/ml and the most resistant bacteria is enterococcus with MIC=10mg/ml and MBC=20 mg/ml.

Conclusion:
According to these results, the Golpar extract is a good choice for studies and supplementary experiments to separate active combinations in extractions to achieve effective antibacterial drugs.

Key words: Golpar – MIC - Antibacterial

Presentation: Poster