POSTERS

SECTION A

201/A

A preliminary study on anti-bacterial effect of Ayurvedic compound preparation of Buddaraja kalka

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Buddaraja kalka is a herbo mineral preparation used in Ayurvedic system of medicine over several hundred years, which contain sixteen herbs and ten minerals . This compound preparation is mainly used for respiratory tract diseases. The objective of this study was to evaluate the antibacterial effect of this drug. Three market samples with different manufacturing dates were selected . Single human dose of 500mg was dissolved in sterile distilled water and shaken at 160 rpm for 04 hours to get the maximum soluble liquid extract . Nutrient broth and Nutrient agar were prepared and sterilized according to the Oxoid manual . Already plated pure test cultures of ,*Escherichia coli (NCTC-009002) Salmonella typhi(NCTC-005714) Staphyloccous aureas (NCTC-006571) Pseudomonas aeruginosa (NCTC-010332) and Bacillus cereus (NCTC008035)*- were inoculated into tubes containing 5 ml of sterile nutrient broth and incubated at 37 ^{0} C for 18 to 20 hours. Sterilized nutrient agar was transferred into sterilized Petri dishes at 40 ^{0} C and allowed to solidify on a horizontal plane and kept in incubator at 37.^{0}C for 24 hours to exclude any contaminations and to reduce the moisture content. A known amount (0.05 ml) of each test culture broth containing specific organisms was added to these solidified agar plates separately (Two plates per each test organism) and spread evenly using a sterilized glass spreader. Well diffusion method (10 mm x 5mm wells) was used to study the effect of the drug. These wells were filled with 0.1 ml of above liquid extract of the drug. Deionized sterilized distilled water 0.1 ml and 0.1 ml of Gentamicin, which contain Gentamicin 25 mg per ml, were used control. These plates were sealed and incubated at 37^{0}C for 24 hours. This same procedure was repeated three times with different samples. For each of the test organism Gentamicin. showed 10 mm -15 mm clear inhibition zones of the bacterial lawns of with Buddaraja kalka, Salmonella typhi, and *Escherichia coli* plates did not show any anti-bacterial effect while *Pseudomonas aeruginosa* plate showed 6mm *and Staphyloccous aureas, and Bacillus cereus* plates showed 5 mm clear inhibition zones of the bacterial lawns on every repetition. These results were statistically analyzed by using one sample student T-Test. All the means are in between accepted levels and P value is <0.05. Comparison to Gentamicin. The Buddaraja kalka is active against *Pseudomonas aeruginosa, Staphyloccous aureas and Bacillus cereus.* This preliminary study scientifically justifies the use of Buddaraja kalka in respiratory tract infections.

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