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EVALUATION OF ANTIMICROBIAL ACTIVITY OF AQUEOUS AND ALCOHOLIC EXTRACT OF *BILWADI AGAD* AGAINST BACTERIAL STRAINS

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ABSTRACT : *Bilwadi agad* is one formulation mentioned in *Asthang Hridyam* chapter 36/84-85 and *Asthang Sangrah* chapter 42/87-88. This formulation has been found useful in the treatment of poisonous conditions of toxicity like *sarpa, luta, vrischik, mushak dansa, jwar, visuchika, ajeerana, gar visha* etc. The present research study was carried out with an objective to search a novel herbal preparation having antibacterial potentials. The aim of the study was to assess the antimicrobial activity by calculating the zone of inhibition on some pathogenic bacterial strains for this two different extract (aqueous and alcoholic) of bilwadi agad were prepared and analysed in lab with different concentration (5%,10%,15%) of extract on different bacterial strains. Antimicrobial study was seen on total 10 bacterial strains i.e *Escherichia coli* (MTCC: 40), *Staphylococcus aureus* (MTCC: 3160), *Pseudomonas aeruginosa* (MTCC: 424), *Salmonella typhimurium* (MTCC: 3231), *Enterobacter aerogenes* (MTCC: 2822), *Klebsiella pneumoniae* (MTCC: 39), *Salmonella paratyphi B* (ATCC: 10719), *Vibrio cholera* (MTCC: 3906), *Shigella dysenteriaes* (ATCC: 13313) and *Clostridium botulinum* (NCTC: 3815). Antimicrobial activity of Bilwadi agad was performed using "well diffusion method" against human pathogenic bacteria. By observing the samples, the activity index of bilwadi agad was found to be greater than 0.5 and this indicates a significant antimicrobial against defined microbes. Standard antibiotic was used as positive control in this study.

Key words : Antimicrobial, *Bilwadi agad*, bacterial strains, herbal, jwar, visha, zone of inhibition.

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INTRODUCTION

In today's era infectious diseases are spreading day by day. Also in decades of dramatic progress the treatment and prevention, infectious diseases remain a major problem causing death and worsens the life of millions of people around the world. In spite of lot of improvement in field of microbiology, we are unable to answer this challenge. Drugs obtained from their natural sources, plays a substantial part in the prevention and treatment of diseases. In many developing countries, traditional medicines or drugs are one of the primary systems for general health care (Nayan and Shukla, 2011). In India, Ayurveda is one of the central systems of traditional medicine practice that uses mainly plants for the treatment in humans (Chopra and Doiphode, 2002). Medicinal plants are well-thought as a rich resource of ingredients, which can be used in better drug development and combination. The compounds found in plants are of many kinds, but mainly they contain constituents like alkaloids, glycosides, polyphenols, and terpenes. Some plants consider as important source of nutrition while others are suggested for their beneficial values (Sakha *et al*, 2018). Ayurveda is already well accepted and used since thousands of years, ayurvedic system of medicine has its long history of healing potential. Today most of the drugs are attained from natural sources or semi synthetic derivatives of natural products which are used in the traditional systems of medicine. Thus, it is a sensible method to drug finding to screen traditional natural products as an alternative of randomly synthesized chemical moieties (Biradar *et al*, 2008). There are many ayurvedic formulations which are