



**ANTIBACTERIAL ACTIVITY OF DIFFERENT EXTRACT OF *CURCUMA LONGA* IN
THE MANAGEMENT OF FISTULA IN ANO**

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ABSTRACT

Ayurvedic parasurgical treatment procedure *Ksharasutra* was one of the effective treatment for management of the fistula in ano. *Curcuma longa* was the one of the main ingredient in a thread. In the present work an attempt has been made to analyze the antibacterial and potential of methanol, ethanol and aqueous extracts of *Curcuma longa* against *E.coli*, *S. aureus*, *S.galactiae* and *P.aeruginosa* among bacterial strains by disc diffusion method and the antibacterial were determined by measuring the diameter of zone of inhibition. The study reports on extraction method using soxhlet extractor. The methanol extracts of *Curcuma longa* possessed the highest antibacterial with a zone of inhibition of 34 mm for, *S. aureus* and lowest 13mm for *P.aeruginosa*, ethanol extract has range of zone of inhibition 31mm-10mm while lowest antibacterial activities was reported aqueous extract range 28mm-11mm zone of inhibition.

KEYWORDS: *Curcuma longa*, Agar well diffusion method Antibacterial activity.

INTRODUCTION

According to World Health Organization medicinal plants serve as the best source for a variety of drugs. Therefore, such plants are being investigated for better understanding of their medicinal properties (Alo, et al., 2012). Plants have been used since ancient times to treat common infectious diseases whether locally within the dermis or a blood infection (Ozcan et al., 2009). Resistance towards drugs developed by pathogenic microorganisms due to their indiscriminate use and side effects due to synthetic drugs, has recently drawn much attention towards plant extracts and biologically active compounds isolated from plant species used in herbal medicine. Medicinal plants represent an alternate to synthetic drugs for the treatment of several non-severe infectious diseases and can also be a possible source for new potent antibiotics to which pathogen strains are not resistant. (Mathur et al., 2011).

Anal fistula a condition is chronically inflamed, abnormal tunnel between the anal canal and the outer skin of the anus. It often drains watery pus, which can irritate the outer tissues and cause itching, pain and discomfort. Fistula in ano is one of the commonest ailments pertaining to the ano-rectal area and is very

difficult to cure by surgical intervention where side effects like incontinence and high chance of recurrence are commonly experienced.

The *Ksharasutra* refers to a medicated thread described in the Ayurvedic text 3000 years back. This thread is prepared by repeatedly smearing special medicines. The technique of treatment involves ligating the entire fistulous tract with a caustic ligature without performing excisional therapy.

During the *Ksharasutra* treatment no antibiotic or antimicrobial drug is administered to the patients. But the chronic granulating tract which usually occurred in ano rectal region frequently gets contaminated with faecal matter and harbor the microorganism. *Curcuma longa* is one of main ingredient in *Ksharasutra* is responsible for the antimicrobial activity.

Curcuma longa has hundreds of molecular constituents, each with a variety of biological activities. For instance, there are at least 20 molecules that are antibiotic, 14 are known cancer preventives, 12 that are anti-tumor, 12 are anti-inflammatory and there are at least 10 different antioxidants. In fact, 326 biological activities of curcuma