

Antimicrobial Activity of Betle Leaf In Precluding Complications of Preeclampsia

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ABSTRACT

Intrauterine infection is the vertical transmission of pathogens during pregnancy affecting fetus, by causing structural and functional abnormalities like low birth weight babies, preterm delivery, intra uterine growth retardation and still birth. Ascending bacterial infections of the placenta by the organisms like, *Escherichia coli*, group B *streptococci*, and *Ureaplasma urealyticum* is usually the most common infectious cause of stillbirth. Women with bacterial vaginosis are more prone to ascending bacterial infection, causing decidual and chorioamnionitis related inflammatory response. Since bacteria and most other infectious agents reaches the fetus through the placenta and treatment with synthetic medicines during pregnancy are toxic, finding of herbal source enriched with antimicrobial function is of high demand. Betle leaf is known for its antimicrobial/antiseptic properties in Indian folkloric medicine and the phytochemical screening of betle leaf found to contain polyphenolic compounds, flavonoid, alkaloids and total antioxidant. The present work, aimed to evaluate the antimicrobial activity with different extracts of *Piper betle* leaves against human pathogenic bacteria, like *Pseudomonas aeruginosa*, *Escherichia coli*, *Staphylococcus aureus* and *Ureaplasma urealyticum*. Salivary and diastase extract showed maximum zone of inhibition against *Ureaplasma urealyticum* followed by other microorganisms. The study shows the promising potential use of *P. betle* extracts against both Gram-positive and Gram-negative especially *U. urealyticum* infection associated with preeclampsia. Results suggest that the extract of betle leaf may be a practicable to sweep over the complications associated with preeclampsia and may be effective in precluding still birth/preterm birth.