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Gynura Procumbens in Paediatrics

Gynura Procumbens (Lour.) Merr., a plant of the Asteraceae family, is referred to in traditional Eastern medicine as a topical anti-inflammatory remedy [1].

In Southeast Asia, *Gynura* plants are widely distributed.

In Thailand, the *Gynura* plant is used externally as an anti-itch and anti-inflammatory treatment, and against the herpes virus [2].

In Singapore, Malaysia, and Indonesia, the plant has been traditionally used as a remedy for eruptive fever, rash, kidney disease, migraine, constipation, hypertension, diabetes mellitus, and cancer [3].

Antimicrobial activity

Research shows that *G. Procumbens* extract exhibits chemo-suppression effects toward malarial parasite strains of *Plasmodium falciparum* 3D7 and *Plasmodium berghei* NK65; possibly via direct inhibition of GSK3 or indirect action on pi3K/Akt pathway.

Furthermore, the ethanolic extract from the aerial parts of the plant has been demonstrated to exhibit virucidal and antireplicative activity against the herpes simplex virus HSV-1 and HSV-2.

This notion was validated in a clinical trial that was conducted on patients who experienced recurrent herpes labialis, in which treatment with *G. Procumbens* herbal gels was found to reduce the number of patients infected with HSV [4].

Meanwhile, the antibacterial action of *G. Procumbens* has also been tested, with the extract exhibiting antibacterial activity against gram-positive and gram-negative bacteria such as *Bacillus cereus*, *Pseudomonas aeruginosa*, *Vibrio parahaemolyticus*, and *Salmonella typhi* [5], [6]. The antifungal activity of *G. Procumbens* against fungi such as *Candida albicans* and *Aspergillus niger* was also observed.

The findings of these studies have provided supporting evidence that substantiate the traditional use of *G. Procumbens* in the treatment of infections by pathogens such as the herpes simplex virus and malaria parasites [7], [8].

Anti-inflammatory action

In Thai traditional medicine, *G. Procumbens* is commonly used to treat inflammation [9]. It has been shown to prevent the increase in ear thickness of mice caused by croton oil-induced inflammation [10].

Additionally, topical application of ethanol extract on the wounds of animals that were tested showed significant dermal healing signs, less scar width, and a considerably faster healing rate when compared with the control group that had been treated with a saline solution [11].

Furthermore, the histological analysis has also revealed that there is a lesser amount of inflammatory cells during the formation of granulation tissue on the wound area and a higher amount of collagen with angiogenesis.

Therefore, the anti-inflammatory and immunomodulatory action of *G. Procumbens* may be utilized for the treatment of inflammatory diseases.

Since 2012, *Gynura* has been cultivated in Cyprus at the plantation of Via Vitae Estate Ltd., in the Limassol area.

Water based extract from the plant demonstrated bactericide and fungicide action [12].

Application of ethanol and water-based extracts showed significant and fast recovery of gingivitis affected areas in dental practice, in post-surgery and post-traumatic ulcer treatments [13], and in gynaecological applications for the treatment of acute colpitis-vaginitis [14].

Materials and methods

The company Via Vitae Estate Ltd., Limassol, has produced the following products of *Gynura Procumbens*, which were used for this study:

Aquintsept, water based natural spray;

Epidan, skin calming oil;

Gynura tea in sachets.

Clinical cases

8 patients (5-12 years old) diagnosed with symptoms of sore throat and 5 adult patients with eczema were observed.

Aquintsept was used as a supporting agent together with antibiotics. The results after 2-3 days of application show that **Aquintsept** acts as an anti-inflammatory agent and has a softening effect on swallowing.

From this group of patients, 5 patients with pharyngitis, aged 8-11 years, already felt better by day 3.

The redness of the throat and the dry cough had decreased.

Epidan was used for 5 adults (mothers) with eczema.

Considerable moisturizing action on affected areas was observed, as well as relief from itching.

Brewed and cooled sachets of **Gynura tea** were used for one week for wiping the skin of 6 children aged between 8 months and 5 years old.

Moisturizing, soothing and relief from itching was observed.

Conclusion

Products of *Gynura Procumbens* demonstrated obvious anti-inflammatory as well as hypoallergenic, soothing, calming and moisturizing properties, and being a natural and safe product, may have good potential in pediatric applications.

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23.04.2018



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