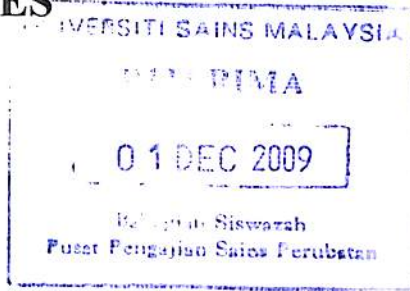


**A COMPARATIVE STUDY OF TUALANG HONEY  
HYDROGEL WITH SAFECARE HYDROGEL DRESSING  
IN THE TREATMENT OF  
SPLIT-SKIN GRAFT DONOR SITES**

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### **III PREFACE**

The use of honey for medicinal purposes traces its roots back to ancient Egypt, and other civilizations. Honey was used for centuries to treat a wide range of medical problems such as wounds, burns, cataracts, skin ulcers and abrasions. Today's researchers worldwide are exploring the strong antimicrobial properties in some honeys.

The rise of antibiotic-resistant bacteria has fueled the resurgence of honey in contemporary thinking. In Australia, the Australian Therapeutic Goods Administration, which is the equivalent of the U.S. Food and Drug Administration, approved honey as a medicine. A company in Australia markets medical honey as a wound dressing in pharmacies there. It is available in the United States through the Internet.

Honey helps wounds in various ways. Numerous studies performed worldwide have investigated the role of honey in wound management. Of particular interest are the works of researchers from the Dr. V. M. Medical College in Maharashtra, India, and from the University of Waikato in New Zealand.

Based on the research results and publications, an Australian company currently markets Medihoney, based on Manuka honey. Ordinary supermarket honey has ingredients that vary depending on the nectar from which the honey is made. In this aspect, Medihoney offers the advantage of laboratory testing, providing a standardized product consistently.

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## VII ABBREVIATIONS

<b>SSG</b>	<b>Split-thickness Skin Graft</b>
<b>FAMA</b>	<b>Federal Agriculture Marketing Authority</b>
<b>MINT</b>	<b>Malaysian Institute of Nuclear Technology, currently known as Nuclear Malaysia</b>
<b>PMNs</b>	<b>Polymorphonuclear Leukocytes</b>
<b>HUSM</b>	<b>Hospital Universiti Sains Malaysia</b>
<b>IM</b>	<b>Intra-muscular</b>
<b>NSAIDS</b>	<b>Non-Steroidal Anti-Inflammatory Drugs</b>
<b>POD</b>	<b>Post-Operative Day</b>

## VIII ABSTRAK

Hidrogel terkenal sebagai pembalut luka. Kajian ini bertujuan untuk melihat kebaikan Madu Tualang apabila ditambah kepada Hidrogel biasa iaitu Hidrogel Safecare. Kajian prospektif secara rawak dijalankan untuk mengkaji dan membezakan ciri-ciri penyembuhan oleh Hidrogel Safecare dan Hidrogel Madu dalam penyembuhan pada bahagian graf kulit.

Pesakit yang menjalani penggrafan kulit akan disaring dalam kajian ini. Bagi pesakit yang memenuhi kriteria yang ditetapkan layak menyertai kajian ini. Pesakit akan dipilih daripada populasi pesakit Hospital Universiti Sains Malaysia (HUSM) sepanjang 18 bulan. Keizinan bertulis diperlukan bagi setiap pesakit ini. Melalui kaedah perawakan, 70 pesakit dibahagikan kepada 2 kumpulan iaitu 35 pesakit menerima balutan komersil iaitu Hidrogel Safecare dan 35 pesakit lagi akan menerima balutan Hidrogel Madu pada bahagian graf yang ditanggalkan. Bahagian ini akan diperiksa pada hari ke-10, 15 dan 20 selepas hari pembedahan. Parameter yang dinilai adalah kadar penyembuhan luka dan penilaian sakit.

Terdapat perbezaan yang dikenalpasti pada kedua-dua parameter bagi 2 kumpulan ini. Kadar penyembuhan luka bagi kumpulan Hidrogel Madu adalah lebih cepat berbanding kumpulan Hidrogel Safecare di mana ia menyebabkan kurang analgesik iaitu kurangnya rasa sakit, kurang rasa ketidakselesaan dan kurang rasa gatal.

Hidrogel Madu memberi kesan terbaik dalam rawatan bahagian graf yang ditanggalkan. Perbezaannya adalah signifikan secara klinikal dan berpotensi dalam mengurangkan kos bagi tempoh pesakit tinggal di hospital dan meningkatkan tahap penyelesaian pesakit.

## **IX ABSTRACT**

Hydrogel is a well established wound dressing. This study looks at the benefits conferred when Tualang Honey is added to plain hydrogel (Safecare Hydrogel). A randomized prospective study was performed to investigate and compare the healing properties of Safecare Hydrogel and Honey Hydrogel with regards to their healing of split skin graft donor sites.

Patients who underwent split skin grafting were screened for this study. Those who met the inclusion and exclusion criteria qualified for the study. These patients were recruited from the patient population in Hospital Universiti Sains Malaysia (HUSM) over a period of 18 months. Individual written consent for inclusion in this study was obtained from each patient. Using simple randomisation, 70 patients were assigned into 2 groups, 35 patients received commercially available Safecare Hydrogel dressing and 35 received Honey Hydrogel dressing applied to their split skin graft donor sites. All donor sites are inspected on the 10th, 15th and 20th post-operative day. The parameters assessed are wound healing rates and pain assessment.

There was a difference observed in both these parameters between both groups. The rate of healing of the wounds were found to be faster in the Honey Hydrogel group and caused less pain, discomfort and pruritus, requiring less analgesia when compared with the Safecare Hydrogel group.

Honey Hydrogel is highly effective in the treatment of split-skin graft donor sites. The difference is clinically significant and reflects potential cost reduction in terms of reduced duration of hospital stay and increased level of comfort for the patient.