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Honey potentially alleviates the analgesic tolerance and physical dependence to morphine in rats**Nor Hidayah Abu Bakar, Hashim S N, Mohamad N, Mustapha Z, Husain R, Che Mat K, Zakaria N H, Adnan L H M, Shariff H and Ulul Ilmie M**
Universiti Sultan Zainal Abidin, Malaysia

Introduction & Aim: Honey has been used traditionally as a remedy as well as a food supplement. Honey is said to be able to cure many diseases. However, its influences on opioid tolerance and dependence have not yet been clarified. The aim is to determine the effect of honey on the development of morphine tolerance and dependence.

Method: Adult male Sprague-Dawley rats were rendered tolerant to the analgesic effect of morphine by injection of morphine (10 mg/kg) twice daily for 14 days. To develop morphine dependence, the rats were given chronic escalating doses of morphine. To determine the effect of stingless bee honey on the development of morphine tolerance and dependence, the hotplate and naloxone precipitation tests were used for the assessment.

Result: Our results showed that chronic morphine-injected rats displayed tolerance to the analgesic effect of morphine as well as morphine dependence. Methadone+Morphine (MetM), Methadone+Morphine+Honey (MetMH) and Morphine+Honey (MH) significantly lower the development of morphine tolerance with p-value $p < 0.05$. In addition, a concomitant treatment of morphine with MH and MetMH attenuated almost all of the naloxone-induced withdrawal signs which include abdominal contraction, diarrhea, pertussis, teeth chattering, and jumping.

Conclusion: The data indicate that honey has a potential to reduce tolerance and dependence in chronic morphine exposure.

Biography

Nor Hidayah Abu Bakar has completed her MD and Master of Pathology (Anatomic Pathology from Universiti Sains Malaysia. She is currently a Senior Medical Lecturer at Universiti Sultan Zainal Abidin, Terengganu, Malaysia. She has a special interest in addiction medicine. She has published several papers on addiction.

hinahej@gmail.com

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