Topical Use of Bee Honey in the Treatment of Keratitis and Postoperative Keratopathy

INTRODUCTION

Infective keratitis is a significant cause of blindness and preventable ocular morbidity worldwide. Infections of the cornea are potentially blinding diseases and may be caused by bacteria, viruses, fungi and a few protozoans, ***(Gopinathan et al., 2001)***. Despite best efforts with early diagnosis and specific antimicrobial treatment about one-third of cases require surgical intervention and those which respond to medical treatment result in scarring that may lead to varying degree of visual disability, ***(Daniell, 2003)***.

There are many published series of infective keratitis from both temperate and tropical parts of the world, and management strategies are well established. However, infective keratitis continues to be an important cause of hospital admission, particularly among vulnerable patient groups such as the elderly, ***(Butler et al., 2005)***.

Honey is a super-saturated sugar solution produced by honey bees from the nectar of plants, as well as from honeydew, a substance produced by insects that ingest the sap of the plant and then excrete it as droplets onto the trunk and leaves of the plant, which is then harvested by the bees, ***(Weston et al 2000)***.

The earliest trace of honey collecting was depicted in a 10,000-year-old Spanish cavern wall painting. Egyptian hieroglyphics dating back at least 3,000 years indicate that early confectioners used honey as a sweetener-

mixing it with various fruits, nuts, herbs, and spices in breads, cakes and pastries, ***(Iglesias et al., 2004)***.

Because honey is one of the most easily assimilated foods, it is still widely used in baked goods, candies, prepared fruits, some cereals and yoghurts. Unfortunately, its nutritional role has been little researched, especially when it comes to quantitative use during the first millennium, ***(Allsop & Miller, 1996)***.

Aminu et al., (2000), concluded that it is possible that "people ate much larger quantities of honey than has previously been acknowledged and that this has implications for the natural role of sugar in modern diets." They add: "Refined sugar may not have generally displaced more nutrient-rich items from our present-day diets, but only the nutritionally comparable food, honey".

For 4,500 years honey has been used in medicine. Somewhat acid, it has mild antiseptic properties and has been employed in treatment of burns and lacerations. In ancient Egypt, honey was also an ingredient of medicines used against scorpion bites and even ptomaine poisoning. Honey would seem provides a certain 'degree of' protection against infection, ***(Bhatia, 2003)***.

There has been a renaissance in the usage of honey as a medicine in more recent times. Possibly the increasing interest in the use of alternative therapies is the result of the development of antibiotic resistance in bacteria becoming a major problem, or because people are experiencing sometimes severe side-effects of many pharmaceuticals, which in the currently prevailing ambience of "chemophobia" may be sufficient to give rise to an aversion to all synthetic drugs, ***(Molan, 1999)***.

In recent years there have been a number of reports in the medical literature regarding the "rediscovery" of honey as a therapeutic agent, although many of these are clinical observations rather than randomized studies, ***(Dunford et al 2000)***.