LETTER TO THE EDITORS

CONSERVATIVE TREATMENT IN AURICLE BURNS

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Dear Sirs,

We appreciated the article "Early management of the burned auricle" by Kamal A., Kamel A.H., and El Oteify M., recently published in *Annals of Burns and Fire Disasters*, 17: 197-200, 2004.

Auricle burns still carry a high rate of infective complications: according to the literature about 10% of cases evolve into chondritis.[1-3]

Several theories are advanced to explain post-burn chondritis physiopathology. One theory sustains that full-thickness loss of skin and perichondrium exposes the cartilage to a high risk of chondronecrosis and subsequent infection. Another possible cause of chondritis is massive post-traumatic oedema and the small-artery thrombosis typical of partial-thickness burns. The interruption of skin continuity may also be regarded as a rupture of the physiological barrier to bacterial infections.[4-7]

Whatever its origin, chondritis represents the main complication of auricle burns. Initially it usually presents with subtle symptoms, and infection becomes clinically evident only once already deeply developed. The aim is to prevent chondritis settlement.

There are basically two main therapeutic trends: a. surgical management requiring early excision of necrotic tissues and immediate coverage with skin graft or, in deeper and less extensive injuries, with local flaps;[6,8-12] and b. conservative management based on the use of local antiseptic and antibacterial protection in order to exclude any possible source of contamination. In both cases it is essential to be careful when dressing to avoid harmful pressure.[5,13,14]

In a review of their cases, Engrav et al. underlined that chondritis develops only in patients with minor lesions that were underestimated or neglected owing to serious general conditions.[9]

At the Verona Burns Unit in Italy, the first choice for treatment for burned auricles has since 1990 been conservative therapy based on topical application of chlorhexidine.[15] Our experience covers 180 patients with 324 burned auricles treated between 1983 and 1996: the first group consists of 189 cases, before chlorhexidine was introduced (1983-1989), treated with antiseptics and/or antibiotics (local and/or general), followed if necessary by early surgical treatment; the second group, consisting of 135 cases, received dressing with chlorhexidine (1990-1996) (*Table I*). The incidence of infection in the first group was 11%, which dramatically dropped until disappearance with the use of chlorhexidine as an antiseptic dressing (*Table II*). We now use 2% chlorhexidine gel.

Table I - Auricle burns related to period of observation and their gravity

		Years		Total number
		1983/1989	1990/1996	
Superficial burns		77	56	133
Deep burns	Deep dermal	69	45	114
	Full-thickness	43	34	77
Total number		189	135	324

Table II - Incidence of chondritis in relation to treatment

	Treatment	
	Without chlorhexidine	With chlorhexidine
Deep dermal burns	5/69	0/45
Ful-thickness burns	16/43	0/34

In conclusion we can affirm that chlorhexidine, rather than other local protective measures, maintains a dry, clean environment, helps to reduce perilesional oedema, and has great antibacterial power against *Staphylococcus aureus* and *Pseudomonas aeruginosa*. Its most remarkable side effect is a painful short-term localized sensation experienced by up to 50% of patients. We highly recommend the prophylactic use of chlorhexidine in patients with auricle burns.

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This letter was received on 26 May 2005.

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