

perform the same role. Local edema may predispose to thrombosis of central vessels, so adjustment of fluid resuscitation and elevation of the head of the patient may be of some value in prevention of suppurative chondritis⁽²⁾.

2. Topical antibacterial to control bacterial proliferation as Mefanide burn cream which is agent of choice which suppressed chondritis significantly⁽⁶⁾. Systemic antibiotics prophylactically have no influence as shown in many studies⁽⁴⁾.

Suppurative chondritis is a devastating complication of auricle burn in which secondary bacterial infection is superadded to thermal damage of the ear cartilage⁽⁷⁾. Chondritis usually seen 3-5 weeks post burn but has occurred as early as 11 days and as late as 9 weeks post burn⁽⁸⁾.

The most common bacteria that causes perichondritis is *Pseudomonas aeruginosa* and it has been found that once chondritis occur the auricle never returns to normal⁽⁹⁾. The majority of the burned auricles heal on conservative treatment. The incidence varies in different studies from less than 3% to 20% or more.

Partial or full thickness burns, and sometimes develop after reepithelialization, has occurred. No one can predict which ear will develop chondritis, which may occur in partial or full thickness burns and sometimes develop after reepithelialization⁽⁹⁾.

Suppurative chondritis may present as dull ear pain increasing in intensity within hours, (springing sign), recent onset of pain, redness, warmth, and swelling suggest the presence of chondritis⁽⁹⁾.

Early diagnosis and treatment are essential to limit the progression of infection and necrosis and to minimize deformity, by complete removal of all non-viable tissues⁽¹⁰⁾.

Different modalities for treatment tried:

1. Anterior and posterior poly ethylene drains for Antibiotic irrigation (Wanamaker 1972; Basiouny et al⁽¹¹⁾).
2. Iontophoresis: By using Antibiotic solutions. (LaForest and Cofrancesco)⁽¹²⁾. apparently successful management of Suppurative ear

chondritis does suggest a clinical potential for the use of the procedure⁽¹²⁾.

3. Excision and drainage leaving the posterior skin intact subsequent wound granulation and epithelialization may occur⁽¹³⁾.
4. Extensive incision filleting the ear open with drainage and moist packing immediately up on diagnosis⁽¹⁴⁾.
5. Grant described the use of dermabrasion of the skin and necrotic cartilage followed by skin grafting within 48 hours⁽¹⁵⁾.
6. Treatment at the institute of surgical research (Dowling, Foley, and Moncrief, 1968, Mills, 1988) consisted of either; Formal debridement with incision and bivalving of the ear and excision of all non-viable cartilage, or; as now more common.

Prompt local debridement of infected tissues after early recognition of the process with a single layer of fine mesh gauze soaked in antibacterial solution between the skin flaps and the dressing changed daily until secondary closure⁽¹⁶⁾.

Methods

For the period of November 1998 to November 2010, 100 patients (100 ears with suppurative chondritis) were studied prospectively at Hilla Teaching General Hospital and Al-Kindy Teaching General Hospital. The patient age ranged from 1 to 35 years with a mean of 24 years.

The age, sex, time from burn to detection of chondritis (Table 1), thickness of burn (Figure 1) prophylactic antibiotics, type of bacteria, number and type of operations to treat chondritis (Table 2) and recurrence were studied.

The treated patients were grouped into 3 categories:

- a. First group treated by stab wound drainage comprised 20 ears.
- b. Second group treated by limited excision comprised 20 ears.
- c. Third group treated by radical excision included 70 ears.