The Cost Effectiveness of Intralesional Steroid Therapy for Keloids

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Over a 6-year period, we collected data from 256 keloid lesions from 192 patients. The patients were collected from the Barts and The London National Health Service Trust catchment area in East London and the City of London, United Kingdom, and all 192 patients were referred from hospital-based surgical specialties and dermatology to our specialist keloid clinic. In our keloid clinic, we treat patients only aged 16 and older who have keloids that have been referred for intralesional steroid therapy administered by one keloid nurse specialist.1

The data were studied on the basis of the size of the keloids, the site of the keloids, low-dose steroid therapy, high-dose steroid therapy, and three types of combination steroid therapy.3

Of the 256 keloids studied, earlobe and sternal keloids were by far the most common sites affected, but the back of the head and the occipital area had keloids with the largest mean surface area (>22 cm²) (Figure 1).

The nonbearded area of the face had a mean dose of steroid injection of 8.75 mg by the end of treatment with no recurrence. Likewise, the bearded area had a mean dose of 20.37 mg, with a 33% chance of recurrence, the upper limbs 21.91 mg with 20% recurrence, the earlobes 16.38 mg with 10% recurrence, the occipital area of the head 18.29 mg with 0% recurrence, and the sternum 35.77 mg with a 16% recurrence rate (Figure 2).

After treatment in our keloid clinic, 43% of patients were discharged with no recurrence, 7.3% returned for further injections, 5% went on to have excision surgery, 8% went on to have camouflage treatment, 2% 28% were partially treated and declined further treatment after steroid therapy, 3% were discharged fully treated with pressure earrings,
and 1% refused steroid therapy and underwent surgery.

Of those who had 10 mg/mL of triamcinolone (Regimen 1), 22% had a recurrence; 25% of those who had 40 mg/mL (Regimen 2) had a recurrence. Patients treated with 10 mg/mL followed by 40 mg/mL (Regimen 3) had a 10% recurrence, those on 40 mg/mL then 10 mg/mL (Regimen 5) had a 50% possibility of recurrence, and those who had 10 mg then 40 mg/mL and then 10 mg/mL (Regimen 4) had a 24% recurrence (Table 1).

In our experience, triamcinolone 10 mg/mL initially followed by 40 mg/mL (Regimen 3) was most effective, with the lowest recurrence rate (10%).

The mean cost of steroid therapy per site is shown in Figure 3. Sternal and chest keloids had the highest mean steroid cost (US$91.73) and the non-bearded facial area the lowest cost (US$22.44). The total amount of steroid required for each keloid was given in multiple sessions, with a 4-week interval between sessions. The amount injected per session was dependent upon the morphology (Figure 4).

Thus, the number of sessions required depended upon the morphology, which influenced the management costs (Figure 5).

<table>
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<tr>
<th>TABLE 1. Steroid Regimens</th>
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<tr>
<td><strong>Regimen Number</strong></td>
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**Figure 2.** Site of the keloid and mean full-treatment dose of steroid (regardless of strength).

**Figure 3.** Total steroid cost (US$) to treat a keloid based on the site of the lesion.

**Figure 4.** Mean number of injections per site.
Conclusion

The mean costs for treatment of keloids on the back of the head (US$776.93) and sternum and chest areas (US$674.98) were highest because they required the most steroid, the largest number of treatment sessions, or both. The back of the head (occipital area), although requiring less total steroid to treat the keloid, required many intralesional steroid sessions, resulting in higher therapy cost. The other sites had keloids for which sessional costs were similar (US$433–547.63), but using a low-strength steroid followed by a high-strength steroid was economically most effective and showed the lowest recurrence rates. The site and morphology of the keloid also influenced treatment outcome.

References


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