

Clinical Research

Intralesional Treatments in a Dermatology Outpatient Clinic: Analysis of One Year

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ABSTRACT

Objective: It was aimed to show the range and application of intralesional drug treatment in a single dermatology outpatient department in this study.
Material and Method: Patients who were treated intralesionally for any dermatological disease were retrospectively examined between January 2016 and January 2017. Intralesionally delivered agents, dermatological diseases and number of patients receiving therapy were noted.
Results: The data of three hundred and forty-four patients were retrospectively analyzed. Twenty four different dermatological diseases were treated intralesionally with nine different agents. Of 344 patients, 179 (52 %) were male, 165 (48%) were female. Their average age was 34,5 years old. The most common indication for intralesional treatment during this period was alopecia areata consisting of 183 in number. Only one case of significant adverse effect was seen in a female patient who was treated for her oral lichen planus.
Conclusion: It is shown that a dermatologist can overcome many challenging problems with this simple, easy and inexpensive method.

Keywords: Dermatological Disease, Intralesional, Treatment.

ÖZET

Bir Dermatoloji Polikliniğinde İntralezyonel Tedaviler: Bir Yıllık Analizi

Amaç: Bu çalışmada bir dermatoloji polikliniğinde intralezyonel tedavinin çeşitliliği ve uygulanabilirliğinin gösterilmesi amaçlandı.
Gereç ve Yöntem: Ocak 2016 ile Ocak 2017 arasında intralezyonel tedavi almış hastalar retrospektif olarak incelendi. İntralezyonel tedavide kullanılan ilaçlar, dermatolojik hastalıklar ve hasta sayıları not edildi.
Bulgular: Üç yüz kırk dört hastanın verileri incelendi. Dokuz ayrı ajanla birimi dört ayrı dermatolojik hastalık, intralezyonel olarak tedavi edildi. Hastaların 179'u (%52) erkek, 165'i (%48) kadın idi. Hastaların ortalama yaşı 34,5 bulundu. İntralezyonel olarak en sık tedavi edilen hastalar, toplam hastaların 183'ünü oluşturan alopecia areata idi. Oral liken planus nedeniyle tedavi edilen bir kadın hasta dışında hiç bir hastada önemli bir yan etki gözlenmedi.
Sonuç: Bu çalışma, bir dermatoloji uzmanının bu basit, kolay ve ucuz yöntem ile tedavisinde zorlandığı birçok dermatolojik hastalığın üstesinden gelebileceğini gösteriyor.
Anahtar Sözcükler: Dermatolojik Hastalık, İntralezyonel, Tedavi.

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Intralesional treatment is a procedure by which the medication is directly given to the skin by a needle in order to treat local skin disease with a maximum benefit and minimal systemic effects. It has been a good therapeutic option for dermatologists since first introduced in 1961 (1). Corticosteroids such as triamcinolone and betamethasone, vitamins including vitamin D and dexpanthenol and even saline and many other agents are used as intralesional treatments for numerous dermatological disorders. Alopecia areata, keloidal scars, lichen planus, onychodystrophias, discoid lupus erythematosus are some leading skin diseases in the long-list of intralesionally treatable dermatosis. Intralesional treatment has unique advantages such as faster and better action, prolonged action duration, better patient compliance and avoiding the long-term

need for drug application (2). However, it has also disadvantages including pain during administration, higher risk of allergy and skin changes such as atrophy and pigmentation.

MATERIAL AND METHOD

A descriptive study was aimed to give information about intralesional procedures which were performed in a single dermatology clinic. Data were collected in an outpatient dermatology department of a research and training hospital located in an urban area, which has a large patient population more than 20,000 a year. Inputs were obtained from medical records of patients between January 2016 and January 2017. The study included 344 patients. Intralesional injective treat-

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ments were analyzed regarding the number of patients, administrated drug and skin disease. 28 or 30 G syringes were used for the injection, rarely 23 or 25 G syringes for viscous drugs.

Nine agents were injected as solely or mixed with another agent in various dilutions for twenty-four different dermatological disorders. Intralesionally delivered drugs were as follows: Triamcinolone acetonide, vitamin D, dexpanthenol, carnitine, prilocaine, clindamycin, tranexamic acid, 5 fluorouracil and saline.

RESULTS

The data of 344 patients were obtained and analyzed retrospectively. 179 (52%) of them were male, the other 165 (48%) patients were female and their average age was 34,5 years.

Almost all injections were painful. However, no previous topical anesthesia was applied due to some how tolerable pain during the injection, except vitamin D injection which is significantly painful. A cold application followed by prilocaine percutaneous anesthesia was done before vitamin D intralesional injection. This provided a tolerable pain during the procedure. 23 or 25 G syringes were used for these injections to provide a better injection with their wider lumen.

Twenty-four different dermatological diseases were treated intralesionally between January 2016 and January 2017.

The most common indication for intralesional treatments was alopecia areata. 53 % of all injectional therapies was for alopecia areata. However, only one patient with some disease including notalgia paresthetica, acne cyst, axillary hyperhidrosis, oral mucocele and post inflammatory hyperpigmentation received intralesional treatment during that time.

The most common agent used for the injection was triamcinolone acetonide. It was injected by mixing with dexpanthenol or saline as 5-10 mg/ml into the dermal part of the alopecic skin. This molecule could be applied in several dilutions according to disease property. Keloidal scar or similar dermatosis which have thick and hard tissue were injected with 40mg per ml. Intralesional administration of Vitamin D was applied by using 23 or 25 G diameter insulin syringes because of viscosity of vitamin D.

A single case of side effect during or after the administration was observed. That was a female patient with oral lichen planus, who was injected into the mucosa of the cheeks. Unilateral cheek edema occurred minutes after the injection, which subsided within six hours without an extra treatment.

The details of intralesional drug treatments are given in table 1.

Table 1. Summary of intralesional drug treatments between January 2016 and January 2017.

Indication	Number of patients	Injected agent
Alopecia areata	183	Triamcinolone acetonide 5-10 mg/ml diluted with dexpanthenol 250 mg/ml or saline
Onychodystrophia	36	Dexpanthenol 250 mg/ml alone or Triamcinolone acetonide 5-10 mg/ml diluted with dexpanthenol 250 mg/ml
Palmoplantar eczema/palmoplantar psoriasis	29	Triamcinolone acetonide 10 mg/ml diluted with prilocaine or dexpanthenol 250 mg/ml
Plantar wart	18	Vitamin D solution 300 000 u
Lichen simplex chronicus	17	Triamcinolone acetonide 10 mg/ml diluted with saline
Psoriasis vulgaris	10	Triamcinolone acetonide 10 mg/ml diluted with saline
Keloidal scar	9	Triamcinolone acetonide 30-40 mg/ml diluted with prilocaine 5-florouracil 45 mg/ml + 4 mg/ml triamcinolone
Ungium incarnatus	7	Triamcinolone acetonide 20 mg/ml diluted with prilocaine
Postherpetic neuralgia	4	A cocktail containing prilocaine, triamcinolone acetonide and saline
Hypertrophic lichen planus	4	Triamcinolone acetonide 30-40 mg/ml diluted with saline
Oral pemphigus vulgaris	3	Triamcinolone acetonide 10 mg/ml diluted with saline
Erosive lichen	3	Triamcinolone acetonide 20 mg/ml diluted with saline
Acne keloidalis	2	Triamcinolone acetonide 20 mg/ml diluted with saline
Actinic cheilitis	2	Triamcinolone acetonide 10 mg/ml diluted with saline
Discoid lupus erythematosus	2	Triamcinolone acetonide 20 mg/ml diluted with saline
Pyoderma gangrenosum	2	Triamcinolone acetonide 20 mg/ml diluted with saline
Granulomatous cheilitis	2	Triamcinolone acetonide 5-10 mg/ml diluted with dexpanthenol 250 mg/ml
Steroid atrophy	2	Saline
Callus	2	Triamcinolone acetonide 30-40 mg/ml diluted with saline
Androgenetic alopecia	2	Carnitine 200 mg/ml and dexpanthenol 250 mg/ml
Acne cyst	1	Clindamycine 150 mg/ml
Notalgia paresthetica	1	Triamcinolone acetonide 10 mg/ml diluted with saline
Axillary hyperhidrosis	1	Triamcinolone acetonide 5-10 mg /ml diluted with saline
Oral mucocele	1	Triamcinolone acetonide 30-40 mg/ml diluted with saline
Postinflammatory hyperpigmentation	1	Tranexamic acid 50 mg/ml
TOTAL	344	

DISCUSSION

Intralesional drug administration is a very common procedure which was performed nearly by all dermatologists worldwide. It is a very effective way in several dermatosis such as keloidal scars, acne keloidalis, oral lichen planus, alopecia areata, localized psoriasis and

localized dermatitis (3-9). Recalcitrant plantar warts could be added to the list (10). So many agents have been utilized for the intralesional treatments. Factors including faster and better action, high patient compli-

ance and short treatment time are superiorities of intralesional treatment (2).

To date, there is no reported article concerning a compilation of intralesional treatments in English or Turkish literature in major indexes. This study collected and summarized intralesional treatments carried out in a dermatology outpatient clinic.

Alopecia areata was the main indication of this retrospective study. This autoimmune skin disease is very commonly seen in dermatology outpatient departments. Intralesional corticosteroid treatment has both higher success and faster response rate compared to other treatments in this entity (6). Thus, a significant number of alopecia areata patients receives the intralesional corticosteroid treatment as the first choice.

The second common indication was onychodystrophias. Since the efficient treatment methods for noninfectious onychodystrophias are so limited, intralesional triamcinolone alone, dexampanthenol alone or combination of both agents became as a good modality to be able to get a satisfactory outcome in our practice.

Another common cause of intralesional injection in the study was palmoplantar pustulosis and psoriasis. After trying several inadequate topical therapies, those patients usually need systemic treatments which are sometimes intolerable due to their adverse effects (9). Therefore, intralesional steroid treatment was a better and significantly effective option in these circumstances.

Intralesional vitamin D injection is a recently proposed alternative treatment option in recalcitrant warts (10). In this study, eighteen patients received this therapy. Vitamin D is different from other intralesionally administered agents due to its viscose property. Injection of such this viscose agent was more difficult in comparison to other drugs, so that only different syringes, 23 G or 25 G, were used in this injection.

Lichen simplex chronicus is a psychocutaneous disorder, which is challenging to control itching in a large number of patients. Several medications including from topical steroids to gabapentin have been used in the treatment of this disease (11). Intralesional corticosteroid therapy, mixed with saline or prilocaine is a good alternative in refractory cases.

Psoriasis vulgaris other than nail involvement, plantar localization and other localized forms have so many treatment options before considering an intralesional intervention. However, a selected group of patients with psoriasis vulgaris still obtain great benefit from intralesional applications. The study patients were

controlled successfully with intralesional triamcinolone mixed with dexampanthenol therapy.

There is no reported case of unguis incarnatus responding intralesional treatment. In our practice, the edematous tissue covering nail plate significantly decreased in size and improved gradually after intralesional triamcinolone mixed with prilocaine administration, giving high satisfaction to the patients without any surgery.

This study contained first use of intralesional triamcinolone injection in severe axillary hyperhidrosis hoping to cause dermal atrophy that leads to less sweating. The patient was refractory to all topical therapies and was not be able to access to botox, iontophoresis and surgery. With the consent of the patient, that injection worked well in this patient at least for a certain time without any side effect.

Only one patient was injected tranexamic acid for treatment-resistant post-inflammatory hyperpigmentation. In contrary to melasma which a success was reported (12), this patient did not satisfy the outcome despite a moderate bleaching was observed.

As seen in the table, post herpetic neuralgia, oral pemphigus vulgaris, hypertrophic lichen planus and several other skin diseases were treated intralesionally with different agents in properly selected patients.

There are still drugs, not used in the presented study, including bleomycin, methotrexate, cyclosporin, immunomodulators, fillers, botulinum toxin, interferon, verapamil etc. all having evidence of benefit in the intralesional treatment of any skin disorder (2).

Side effects of intralesional injections are generally local, but sometimes even anaphylaxis may be seen (13). Of 344 patients analysed in this study, only one case of unexpected reaction occurred. It was unilateral diffuse cheek swelling seen in a female patient who had long-standing recalcitrant oral lichen planus, after triamcinolone injection into her cheek mucosa. Thereaction subsided completely within six hours without any intervention. The other side effects were totally local including localized steroid atrophy and hypopigmentation which many of them improved gradually.

In conclusion, intralesional treatment is relatively safe, effective, fast and simple method to be performed in all dermatology departments needing no sophisticated or expensive tools. Although triamcinolone, betamethasone and other steroids are widely used for the intralesional treatments, It is shown in this study that there are so many underutilized agents which can be used for these purposes.

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