Outcomes among scalp psoriasis patients: is scalp psoriasis resistant to topical treatment?

Abstract

Scalp psoriasis is considered notoriously difficult to treat, despite good percutaneous absorption of topical corticosteroids through scalp skin. Poor adherence to treatment is often the cause of poor treatment outcomes. Our objective was to gain preliminary assessments of scalp psoriasis treatment outcomes from our patients’ perspectives, and to assess the feasibility of telephone-based follow up of scalp psoriasis treatment. Chart review identified adults seen for scalp psoriasis in the past 3 years. Thirty patients were queried regarding their current disease state, treatment satisfaction, and whether they called the office to report disease progress. 87% of the patients reported “doing well” or “moderate improvement”; of these patients, 69% were on only one topical treatment. 90% were on topical treatments alone; of these patients, 93% reported “doing well” or “moderate improvement.” Three of 15 patients who were told to call their provider and report treatment progress followed the instruction; those 3 reported “doing well.” Patients given a simple topical corticosteroid treatment regimen and encouraged to report their progress achieve at least moderate improvement. The dogma that scalp psoriasis treatments are resistant to treatment should be reassessed, and larger controlled trials should be done to develop and test adherence interventions to improve scalp psoriasis outcomes.

Keywords: disease control, follow-up, communication

Introduction

Scalp psoriasis is considered one of the most challenging forms of psoriasis to treat, despite good percutaneous absorption of topical corticosteroids through scalp skin. Application of topical treatments is inherently complex, and successful topical application to hair-bearing scalp is a far more difficult task. Poor adherence to scalp treatment is often the culprit for less than ideal scalp psoriasis treatment outcomes.

Because scalp psoriasis is thought to be resistant to topical treatment, costly systemic treatments are being developed as scalp psoriasis treatments; improving use of topical treatments may be a less costly approach to managing scalp psoriasis. Adherence to scalp psoriasis treatments potentially could be improved by making the treatment plan simple for patients to understand and follow and by creating greater accountability for good use of the treatment. Early return visits increase patients’ use of topical treatment but are often not feasible; having patients call to report the progress of their treatment a few days after beginning treatment potentially could be another way to create accountability that would increase patients use of treatment. The purpose of this study was to gain a preliminary assessment of scalp psoriasis treatment outcomes and self-reported treatment adherence among patients (not clinical trial subjects) and to explore the potential of having patients report the initial results of their treatment by telephone as a means to promote greater treatment accountability.

Methods

The study was approved by Wake Forest University School of Medicine Institutional Review Board. In a retrospective chart review, patients who were 18 years of age or older, diagnosed with psoriasis (ICD-9: 696.1) in the past three years by a provider at the Wake Forest Baptist Medical Center Department of Dermatology, and had scalp psoriasis indicated in the chart were included in the study. Patients were excluded if they were not provided a treatment regimen at the visit during which they were initially diagnosed with scalp psoriasis, not proficient in English, or did not have an active phone number. A randomized list of patients with psoriasis was reviewed to identify patients who met inclusion criteria. Information on age, gender, and type of treatment was gathered. Patients’ medical records were reviewed to determine if they were asked to call to report their progress, Eligible patients were contacted and asked three questions (Table 1). If patients were unable to be contacted after three phone call attempts or denied participation, the next subject on the list was contacted until 30 patients were enrolled in the study.

Table 1 Telephone questionnaire administered to new patients with scalp psoriasis

|   | Question                                                                 |
|---|--------------------------------------------------------------------------|
| 1 | Did you receive patient instructions to call the office in a few days to report on your treatment progress? |
| 2 | How is your scalp doing currently?                                          |
| 3 | Are you happy with your treatment?                                         |

Patients were categorized according to treatment regimen, follow-up communication with provider, and disease state. Patient qualitative responses were analyzed to assess patient-centered perceptions of treatment outcomes among patients with scalp psoriasis in relation to treatment complexity. The responses were analyzed and sorted into three categories: “doing well,” “moderately improved,” and “doing poorly.” Specific patient responses correlating to treatment outcomes were documented as well (Table 3). We also collected preliminary data on whether following-up to report treatment progress via phone call affected patient’s perception of current disease severity and patient satisfaction with treatment. Microsoft Excel was used for data management and analysis.
Table 2 Scalp psoriasis treatment information for study patients

| S no | Treatment regimen                                | Did patient call provider? | Current disease state     |
|------|--------------------------------------------------|----------------------------|---------------------------|
|      | Call' patients                                   |                            |                           |
| 1    | Clobetasol .05% Solution                         | Yes                        | Doing Well                |
| 2    | Clobetasol .05% Solution                         | Yes                        | Doing Well                |
| 3    | Clobetasol .05% Solution                         | No                         | Doing Well                |
| 4    | Clobetasol .05% Solution                         | No                         | Doing Well                |
| 5    | Clobetasol .05% Solution                         | No                         | Doing Well                |
| 6    | Clobetasol .05% Solution                         | No                         | Moderately Improved       |
| 7    | Clobetasol .05% Solution                         | No                         | Moderately Improved       |
| 8    | Clobetasol .05% Solution                         | No                         | Moderately Improved       |
| 9    | Clobetasol .05% Solution                         | No                         | Doing Poorly              |
| 10   | Clobetasol .05% Solution, Adalimumab             | No                         | Doing Poorly              |
| 11   | Clobetasol .05% Solution, Adalimumab             | Yes                        | Doing Well                |
| 12   | Clobetasol .05% Solution, Adalimumab             | No                         | Doing Well                |
| 13   | Fluocinonide .05% Solution                       | No                         | Doing Poorly              |
| 14   | Fluocinolone Solution .01%, Clobetasol Solution .05% | No                  | Doing Well                |
| 15   | Triamcinolone ointment, Acitretin, Methotrexate, Cephalexin | No                        | Moderately Improved       |
|      | 'No call' patients                               |                            |                           |
| 1    | Clobetasol .05% Solution                         | No                         | Doing Well                |
| 2    | Clobetasol .05% Solution                         | No                         | Doing Well                |
| 3    | Clobetasol .05% Solution                         | No                         | Moderately Improved       |
| 4    | Clobetasol .05% Solution, Talconex Solution      | No                         | Doing Well                |
| 5    | Clobetasol .05% Solution; OTC shampoo (DHS shampoo) | No                  | Doing Well                |
| 6    | Clobetasol .05% Solution; OTC Zinc shampoo       | No                         | Doing Well                |
| 7    | Fluocinonide .05% Solution                       | No                         | Doing Well                |
| 8    | Fluocinonide .05% Solution                       | No                         | Doing Well                |
| 9    | Fluocinonide .05% Solution                       | No                         | Moderately Improved       |
| 10   | Fluocinonide .05% Solution                       | No                         | Moderately Improved       |
| 11   | Fluocinolone Solution .01%, Clobetasol Solution .05% | No                  | Doing Well                |
| 12   | Adamimumab, OTC lotion (Aveeno)                  | No                         | Moderately Improved       |
| 13   | Infliximab, Methotrexate, Triamcinolone ointment | No                         | Doing Poorly              |
| 14   | Ketoconazole 2% shampoo                          | No                         | Doing Well                |
| 15   | Stelara, Triamcinolone Ointment, Hydrocortisone 2.5% Cream | No                        | Doing Poorly              |
Table 3 Qualitative patient responses when asked, “How is your scalp doing currently?”

| Treatment report | % (n) | Examples |
|------------------|-------|----------|
| “Call” patients   |       |          |
| Doing Well        | 53 (8)| “I’m doing so well! I don’t have any more left.” |
| Moderately Improved | 27 (4)| “My psoriasis is doing well but I have to just keep using the medicine.” |
| Doing Poorly      | 20 (3)| “It is doing awful, this usually happens this time of the year.” |
| “No Call” patients |       |          |
| Doing Well        | 66 (10)| “I’m overall very happy, my goal was to not get any worse and my psoriasis hasn’t gotten worse.” |
| Moderately Improved | 27 (4)| “It’s off and on. I ran out of my medicine and haven’t gone back and got more.” |
| Doing Poorly      | 7 (1) | “It is doing horribly.” |

Results

After identifying candidates by chart review, 55 patients were called and 30 patients (55%) were enrolled in the study (Figure 1). The remaining 25 patients were unreachable after three phone call attempts or denied participation. The ages of the patients who did not answer the phone call (mean age 51, SD±16, range 26-75) were similar to those of responders (mean age 56, SD±19, range 27-95). A total of 30 patients were enrolled. Twenty-two patients enrolled (73%) were females.

Overall, 87% (26 out of 30) of the patients reported “doing well” or “moderate improvement.” Sixty percent (n=18) of patients with scalp psoriasis reported doing well and 27% (n=8) of patients with scalp psoriasis reported moderate improvement (Table 2). All patients included in the study were using at least one topical treatment with or without a systemic or biologic treatment for their scalp psoriasis (Table 3). Ninety percent (27 out of 30) of patients enrolled in the study were using topical treatments alone (Table 2). Of these patients, 93% (25 out of 27) reported “doing well” or “moderate improvement.” Of patients who are doing well or who have moderately improved, 69% of them (18 out of 26) were on a simple treatment regimen of only one topical treatment. Ten percent (3 out of 30) of patients were on combination treatment regimens that involved three or more medications, including topical medications and systemic medications (Table 2). Of these patients, 66% (2 out of 3) of patients reported “doing well” or “moderate improvement,” and 33% (1 out of 3) of patients reported “doing poorly.”

Fifteen of the 30 patients were told to call their provider to report treatment progress. Thirteen of these 15 patients remembered being told to call to report treatment progress. However, only 3 patients (20%) remembered calling about treatment progress; they reported the following: “I’m doing very well and I’m very satisfied with my treatment and care,” “I’m doing a lot better than usual and I’m happy with my treatment progress,” and “My scalp is staying under control and the treatment is working very well.” There was a trend that the patients who followed instructions to call to report treatment progress were doing better than those who did not follow instructions to call (p=0.055). When asked about treatment progress, one patient replied, “My treatment does well when I use it properly but with two grandkids it’s hard for me to remember.” Another replied, “My psoriasis is off and on. I ran out of my medicine and haven’t gone back to get more yet.”

Figure 1 Disposition of study patients.

Discussion

Although scalp psoriasis is reported as being difficult to treat, 87% of the patients we interviewed reported that their condition was “moderately improved” or “doing well.” 90% of patients enrolled in our study were on topical treatments alone, and 93% of these patients reported “doing well” or “moderate improvement.” Patients on combination treatment regimens, involving three or more treatments including both topical and systemic medications, reported poorer treatment outcomes; only 66% patients reported “doing well” or “moderate improvement.” Complex treatment regimens may not be necessary for scalp psoriasis management. Complexity of drug regimen reduces medication adherence, and potentially could make disease control more difficult. In this case series, a simple treatment protocol frequently provided a good scalp psoriasis treatment outcome.

Having patients report their progress by phone call a few days after being started on a treatment has been used in our clinic population in an effort to improve adherence and outcomes. The patients who were told to call had overall worse outcomes compared to patients who...
were not told to call. Patients who were told to call may have had more severe disease and may have been told to call to report their disease progress because of more severe disease or a greater expectation of poor adherence.

All patients (n=3) who were told to call back and followed instruction reported doing well, suggesting the possibility that patients compliant with calling their provider are also compliant with the treatment. Conversely, patients who were instructed to call to report their progress but who did not call had a tendency toward poorer treatment outcomes. Poor adherence to the request to call may be indicative or poor adherence in general, which could account for worse outcomes. A controlled trial of callback would better assess this relationship.

Some patients who are “doing poorly” often say their medication “isn’t working.” While normal scalp is not a formidable barrier to medication penetration, diseased skin should have even worse barrier function. Scalp psoriasis is sensitive to topical treatment when adequately used. Poor response to topical treatment is likely due to poor compliance, as less than 50% of patients are adherent to topical therapy regimens.

Limitations to this study include the retrospective nature, patients were not randomized to call or no-call groups, and patients with newly diagnosed scalp psoriasis accounted for only a small percentage of psoriasis patients at our center. Furthermore, given that this was a single-center study, the results may not be generalizable. Though this study assessed a small sample size, generalizability was addressed by use of randomized sample and non-responders had demographic characteristics similar to responders.

Another limitation of this study includes the subjective nature of evaluating treatment outcomes, based on treatment perceptions among patients, compared to a more objective measure such as the Psoriasis Scalp Severity Index (PSSI). However, the objective of our study was to evaluate patient-centered perceptions of their treatment outcomes, and we felt this was best addressed by asking patients their current disease state. Future studies using the PSSI could contribute to our overall understanding of treatment adherence to topical treatments for patients with scalp psoriasis.

Conclusion
Achieving good adherence with topical treatment to an area covered with hair is a high hurdle that may lead to the impression that scalp psoriasis is resistant to topical treatment. Although scalp psoriasis is reportedly difficult to treat, many patients given a simple topical corticosteroid treatment regimen and encouraged to report their progress achieve at least moderate improvement. The dogma that scalp psoriasis is resistant to treatment should be reassessed, and larger controlled trials should be done to develop and test adherence interventions to improve scalp psoriasis outcomes.

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Conflict of interest
Author declares that there is no conflict of interest.

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