

Dermatology's adherence: an overview of the previous 20 years

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ABSTRACT

Background: Despite adherence has been researched in many fields of medicine, there aren't many studies that specifically address it in relation to dermatology.

Objectives: This review's objective is to provide an overview of the most recent research on dermatology-specific medical adherence.

Methods and Materials: Between the years 1985 and 2005, we searched PUBMED using the phrases [adherence AND dermatology] and [dermatology AND therapy]. The search was restricted to human subjects and English-language articles.

Results: 57 papers were found in the literature search. In order to define, measure, quantify, validate, and comprehend adherence in dermatology, seventeen of these papers were examined.

Conclusions: Because topical therapy adherence among dermatological patients is difficult to gauge accurately, there aren't many papers on the subject. New electronic monitoring equipment has been used in a small number of studies that have revealed low treatment regimen adherence rates among dermatology patients. Patient non-adherence is influenced by socioeconomic,

cognitive, and psychological aspects. Patient adherence can be increased through increasing patient education and the doctor-patient relationship.

Keywords: Adherence, compliance, dermatology, treatment

INTRODUCTION

The term 'compliance' (also known as "compliance") refers to how closely a patient follows a prescribed course of action after consenting to it (1). Non-adherence is a public health issue since nearly half of all patients who are given medications for a chronic ailment stop taking them within a year (1,2). Patients taking hazardous, subtherapeutic doses of medication or doctors mistaking non-adherence for the need for a greater drug dose could both have negative consequences on a patient's health as a result of non-adherence (3,4). The US spends an estimated \$300 billion on the morbidity and mortality that result from non-adherence alone, which adds to the rising cost of healthcare (1,2). The focus of many articles on the topic of adherence has been on chronic conditions like diabetes, HIV, and hypertension.

Dermatology, a medical specialty that serves a large number of patients with chronic skin conditions such as acne, rosacea, atopic dermatitis, and psoriasis, has little published research on adherence. For disease management and therapy, assessing adherence among persons with chronic skin problems is crucial, especially in light of the low rates of adherence among those with other chronic illnesses. This review's objective is to provide an overview of the most recent research on dermatology-specific medical adherence. The goal is to define, validate, and measure adherence while also understanding what causes non-adherence and suggesting strategies to improve adherence to treatments for dermatological illnesses.

METHODS AND MATERIALS

Between the years 1985 and 2005, we searched PUBMED using the phrases [adherence AND dermatology] and [dermatology AND therapy]. The search was restricted to human subjects and English-language articles. The following inclusion criteria were used to assess the article abstracts.

criteria: (i) the primary focus of the study must be adherence and how it relates to dermatology; and (ii) the study's goal must be to measure or evaluate compliance. For instance, abstracts that discussed policy conformance were among those that were disregarded.

RESULTS

57 papers were found in the literature review. After examining the abstracts, 17 articles were chosen, and this paper reviews them.

Establishing adherence

Adherence describes a commitment between the patient and the doctor to achieving the main objective of the best possible treatment outcome (5). A set of guidelines, actions, or modes of conduct, such as how much and how frequently to take medication, may be stated in this agreement. Recently, this term has gained popularity among medical experts, who previously favoured the term "compliance." Chren discusses the irony of the word compliance in the editorial "Rethinking compliance in dermatology," noting that it has linguistic roots in the word pliant, but that in the field of medicine, compliance has the opposite of flexibility in mind: those who are compliant do not stray from the rules that are enforced by authority (6). Instead, compliance suggests a more authoritarian approach in which the doctor prescribes or demands instructions to be followed by the patient, whereas adherence suggests a sharing in the planning and prescribing process. In British literature, the word "concordance," which is related to "adherence," has been employed (5).

Electronic monitoring enhances the ability to analyse compliance objectively. Microprocessors are used in electronic monitoring devices, also known as electronic medication event monitors, to measure and record information such as the date and time of medication events. For instance, Medical Event Monitors (MEMS, Aardex Corp., Fremont, CA, USA) have microprocessors in the bottle cap of a typical pharmaceutical bottle that record the time, date, and duration since the last bottle opening every time the bottle is opened (10). MEMS caps can be used to track compliance with topical therapy in addition to pills (7).

MEMS caps have several drawbacks, but they do provide a mechanism to precisely record missing doses and reduce the possibility of reporting bias (7). Although it may be unusual, patients may open the bottle without taking the drug. Reusing the caps is not advised because they are pricey and challenging to clean after being used with lotions, gels, and ointments. Some topical drugs might not be able to be transferred into bottles with MEMS caps without altering their chemical composition. Despite these drawbacks, only 11% of patient logs and electronic monitoring agree (8). Researchers found that patient diaries and medication weight-based adherence had higher adherence rates than electronically monitored adherence in a research comparing the two types of measures ($p < 0.05$). Electronic monitoring enables a more accurate technique of adherence as a result.

Dermatology adherence measurement

Like in any other medical specialty, dermatology requires research to better understand the link between drug adherence and therapeutic success. There aren't many studies that have measured adherence in dermatology, though. A hospital-based outpatient population of 687 individuals complied to isotretinoin or conventional therapy at a rate of 65%. (12). According to objective and self-report assessments, 61% of psoriasis patients adhered to oral and topical medication (13). These numbers were computed using information from patient interviews, pill counts, and medication weights (12,13). Psoriasis patients in one research were told they would be watched and had to keep a diary, but they were not informed that electronic monitors would be used to gauge adherence.

According to the electronic monitors, adherence rates were at 55%, although they were far higher in the diaries. Subjects underestimated adherence, and the authors came to the conclusion that it would probably be much lower in a non-study, unmonitored context (8) proving compliance.

Due to the difficulty in accurately detecting some diseases and the variable and often unpredictable ways in which some dermatological disorders respond to medical treatment, non-adherence may contribute even more to the failure of some dermatological therapies. For the

research of adherence in dermatology, conditions such atopic dermatitis, psoriasis, acne vulgaris, tinea pedis, and rosacea would be ideal (14).

Improving adherence

What are the most effective approaches in dermatology to boost patient adherence? There are several effective and useful approaches to encourage and boost adherence . In order to increase adherence in clinical trials, researchers should make an effort to create initiatives that are relevant to the community and involve it from the project's very beginning (19).

Participant beliefs and any stigmas connected to the sickness or condition under inquiry should be taken into account in this involvement. These suggestions would be especially helpful to any groups that might not fully comprehend the research's purpose, who may have preconceived notions about its validity, or who may have doubts about the investigators' ultimate objectives.

The following actions should be taken by institutions to create a community-institutional partnership: (i) assign institutional researchers to community advisory boards; (ii) provide grant writing assistance to community groups and organisations; (iii) add a line item to current grants to allocate money for entering the community and forming relationships; and (iv) make use of established channels of communication like local radio talk shows, television programmes, and print media (19). Disseminating study findings from earlier studies as they relate to the specific community is one approach to do this (19).

Finally, more thorough research on clinical trial recruitment and compliance is required to determine how to boost representative trial participation (19).

Psychologically and cognitively, doctors should work to establish a solid rapport with their patients. This involves being aware of and responsive to each patient's problems. Physicians who understand their patients' emotions and how their skin problems influence their lives (and then express this awareness to patients) are more likely to build deeper relationships with them and hence boost compliance (8). Knowing a patient's routines and interests might assist schedule

doses for some crucial daily tasks (15). The most effective approaches to establish a strong doctor-patient connection are to demonstrate your understanding, respect, and personal admiration for the patient (11). Additionally, it has been proven that adherence coaching does enhance health outcomes (14).

The severity of patients' eczema was reduced by 89% as a result of repeated instruction and demonstration of topical therapy by specialised dermatology nurses (5). The best treatment for atopic dermatitis is spending time with patients to hear their questions and concerns, explain the causes, and show them how to properly apply topical treatments . It is impossible to overstate the importance of taking extra time (15). It is helpful to write out instructions, keep things simple, and make sure that expectations are realistic in addition to allotting enough time for patient education (11). The safety, effectiveness, and proper application of topical corticosteroids require more consistent information among medical providers (20).

DISCUSSION

In our therapeutic approach to patients with any ailment, we make the implicit assumption that patients who adhere more closely to their drug regimen will be more likely to have the intended therapeutic effect. The impact of adherence in clinical practise and clinical trials in the field of dermatology has only recently been addressed, despite the fact that this premise has been examined and validated by research in a few medical disciplines. We now have new, highly developed technology tools at our disposal to aid in our deeper understanding of the connection between adherence and efficacy rates. Since most data on efficacy rates for topical conditions in dermatology are now dependent on the use of unreliable logs or weights, such analysis is necessary.[20-21] The next step in understanding the relationship between adherence rates and efficacy rates is to address the question of what precise function more precisely measured adherence might play.

A detailed investigation of the socioeconomic, cognitive, and psychological aspects that affect adherence allows us to provide useful and practical strategies to increase adherence in the dermatologic patient, which is important in addition to thoroughly defining, validating, and

assessing adherence. No matter how hard doctors work to build a solid doctor-patient relationship, involve patients in the planning process, provide sufficient information, and stress the value of adherence, complete adherence might not be possible. In addition to working to increase adherence rates, we should try to comprehend and respect the special role that adherence plays in the effective management of dermatologic disorders.

REFERENCES

1. Cork MJ, Britton J, Butler L, Young S, Murphy R, Keohane SG. Comparison of parent knowledge, therapy utilization and severity of atopic eczema before and after explanation and demonstration of topical therapies by a specialist dermatology nurse. *Br J Dermatol.* 2003;149: 582–9.
2. Chren MM. Doctors orders. Rethinking compliance in dermatology. *Arch Dermatol.* 2002;138:393–4.
3. Balkrishnan R, Carroll CL, Camacho FT, Feldman SR. Electronic monitoring of medication adherence in skin disease: Results of a pilot study. *J Am Acad Dermatol.* 2003;49:651–4.
4. Carroll CL, Feldman SR, Manuel JC, Balkrishnan R. Adherence to topical therapy decreases during the course of an 8-week psoriasis clinical trial: commonly used methods of measuring adherence to topical therapy overestimate actual use. *J Am Acad Dermatol.* 2004;51:212–16.
5. Feinstein AR. On white-coat effects and the electronic monitoring of compliance. *Arch InternMed.* 1990;150:1377–8.
6. Urquhart J. The electronic medication event monitor. Lessons for pharmacotherapy. *Clin Pharmacokinet.* 1997;32:345–56.
7. Urquhart J. Can drug delivery systems deliver value in the new pharmaceutical marketplace? *Br J Clin Pharmacol.* 1997;44:413–19.
8. Zaghloul SS, Cunliffe WJ, Goodfield MJD. Objective assessment of compliance with treatments in acne. *Br J Dermatol.* 2005;152:1015–21

9. Meredith PA. Therapeutic implications of drug ‘holidays.’ *Eur Heart J.* 1996;17Suppl A: 21–4.
10. Claxton AJ, Cramer J, Pierce C. A systematic review of the associations between dose regimens and medication compliance. *Clin Ther.* 2001;23:1296–310.
11. Feldman SR, Housman TS. Patients’ vehicle preference for corticosteroid treatment of scalp psoriasis. *Am J Clin Dermatol.* 2003;4:221–4.
12. Mihalko SL, Brenes GA, Farmer DF, Katula JA, Balkrishnan R, Bowen DJ. Challenges and innovations in enhancing adherence. *Control Clin Trials.* 2004;25(5):447–57.
13. Charman CR, Morris AD, Williams HC. Topical corticosteroid phobia in patients with atopic eczema. *Br J Dermatol.* 2000;142:931–6.
14. Fischer G. Compliance problems in paediatric atopic eczema. *Aust J Dermatol.* 1996;37:S10–S13.
15. Renzi C, Picardi A, Abeni D, Agostini E, Baliva G, Pasquini P, et al. Association of dissatisfaction with care and psychiatric morbidity with poor treatment compliance. *Arch Dermatol.* 2002;138:337–42.
16. DiMatteo MR, Lepper HS, Croghan TW. Depression is a risk factor for noncompliance with medical treatment: metaanalysis of the effects of anxiety and depression on patient adherence. *Arch Intern Med.* 2000;160:2101–7.
17. Ohya Y, Williams H, Steptoe A, Saito H, Iikura Y, Anderson R. Psychosocial factors and adherence to treatment advice in childhood atopic dermatitis. *J Invest Dermatol.* 2001;117:852–7.
18. Van de Kerkhof PC, de Hoop D, de Korte J, Cobelens SA, Kuipers MV. Patient compliance and disease management in the treatment of psoriasis in the Netherlands. *Dermatology.* 2000;200:292–8.

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19. Van de Kerkhof PC, de Hoop D, de Korte J, Cobelens SA, Kuipers MV. Patient compliance and disease management in the treatment of psoriasis in the Netherlands. *Dermatology*.2000;200:292–8.
20. Richards HL, Fortune DG, O’Sullivan TM, Main CJ, Griffiths CE. Patients with psoriasis and their compliance with medication. *J Am Acad Dermatol*. 1999;41:581–3.
21. Basak PY, Ozturk M, Baysalt M. Assessment of information and education about topical corticosteroids in dermatology outpatient departments: experience from Turkey. *J Eur Acad Dermatol Venereol*. 2003;17:652–8.