

The American Contact Dermatitis Society, Contact Dermatitis and Patch Testing

Dermatitis is a Common and Significant Skin Disease

Although dermatitis (ICD-9: 692.9) is one of the most common illnesses affecting the U.S. population, the most common cause of dermatitis, contact with environmental factors (contact dermatitis ICD-9: 692.3, 692.4, 692.6, 692.81, 692.83, 692.89, also 692.9) is easily curable. In order to provide the appropriate therapy, however, it is imperative that the patient presenting with dermatitis is correctly evaluated and identified as having contact dermatitis.

Chronic contact dermatitis has a dramatic negative effect on the quality of life of affected patients (Kadyk 2004; Kadyk 2003; Thompson 2002; Anderson 2001; Hutchings 2001; Rajagopalan 1997; Rajagopalan 1997; Rietschel 1995). It most commonly involves the skin of the hands and the face, but it can involve any region of the skin. With incorrect diagnosis, many patients continue to suffer and undergo multiple specialist visits, and numerous treatments including topical, oral and parenteral steroids, ultraviolet therapy, and various oral immunosuppressants. This all impacts negatively on the patients' quality of life, is responsible for frequent absences from work, and adds significantly to the cost of health care.

Contact Dermatitis is Curable if Diagnosed Accurately

Contact dermatitis is one of the only types of dermatitis that is completely curable. This means if specific allergens are identified and appropriate strategies are implemented for allergen avoidance, many patients will no longer require physician visits and prescriptions. It has been repeatedly demonstrated that patch allergy testing has a positive impact on the quality of life of dermatitis patients and that patch testing is cost effective (Scalf 2007; Woo 2003; Thompson 2002; Rajagopalan 1998; Rajagopalan 1998; Rajagopalan 1997; Dupont 2005).

Contact Dermatitis can only be Diagnosed by Patch Testing

Allergic contact dermatitis can ONLY be definitively diagnosed with a patch allergy test (CPT Code 95044). Patch testing is completely different from and unrelated to prick allergy test (CPT Code 95004). In addition to being completely unrelated tests, they are used for diagnosing completely different diseases. Patch testing is used for diagnosing delayed-type, cell-mediated contact dermatitis, whereas prick testing is used for diagnosing immediate, IgE-mediated rhinitis, asthma, conjunctivitis, urticaria, and food allergy.

Diagnostic Patch Testing is Time-Consuming and Complicated

Patch testing is a time-consuming, complicated test that requires 2-3 office visits over one week, requiring significant investment of time by the patient and considerable time by the physician to properly interpret positive reactions and educate patients about their allergens. Briefly, allergens are applied to the patient's back, under occlusion, with hypoallergenic tape at the first visit. The allergens and tape remain in place for 2 days and then are removed. An initial reading is performed by the physician 2 days post placement. Another reading is performed by the physician 3-7 days post placement. The physician assesses the site where each allergen was placed for redness, edema, infiltration, scaling, and blisters. Based on these variables, the patient is judged to have an allergic reaction, an irritant reaction, or no reaction to each allergen. The expert physician must then integrate the results of patch testing with the patient's history, exposures, and physical exam to determine if the positive allergic reactions are clinically relevant.

Limited Screening Series have Limited Value

Limited patch testing typically involves testing with 24 to 50 allergens (24 – 50 units of CPT Code 95044). Some physicians, primarily dermatologists and allergists, possess the necessary expertise to perform limited patch testing, which is an appropriate initial step for some patients. However, many studies have shown that only about 1/3 of the patients or fewer were fully evaluated by use of a limited patch test screening series (Hoeck 2005; Belsito 2004; Nettis 2003; Saripalli 2003; Suneja 2001; Katsarma 1999; Larkin 1998; Cohen 1997). In the other patients with contact dermatitis in these studies, limited patch testing did not yield a diagnosis, and these patients then required comprehensive patch testing for diagnosis. Setting a quota for a maximum number of allergens placed per patient or restricting testing only to certain arbitrary time intervals (i.e every 1-3 years) can needlessly interfere with the diagnostic process, delay effective treatment for the patient and result in unnecessary increased costs.

Diagnosis of Contact Dermatitis Often Requires Extensive Patch Testing

Comprehensive patch testing should only be performed by those physicians who have significant training, interest, knowledge, and expertise in contact dermatitis and patch testing. In comprehensive patch testing, the patient is tested with a large number of allergens, typically between 65 and 200 (65 to 200 units of CPT Code 95044). The specific allergens used and the number of allergens tested are tailored to each patient, based on the patient's medical history, findings on examination, and environmental exposure history. Comprehensive patch testing has been demonstrated repeatedly to have a much higher probability of yielding a diagnosis of a specific allergy for a patient, compared to limited patch testing, thus leading to a much higher probability of a cure (Militelto 2006, Hoeck 2005; Pratt 2004; Marks 2003; Belsito 2004; Simpson 2004; Templet 2004; Nettis 2003; Saripalli 2003; Sheretz 2001; Suneja 2001; Katsarma 1999; Larkin 1998; Marks 1998; Cohen 1997). For these reasons, it is often appropriate to forgo limited patch testing and proceed directly to comprehensive patch testing for many patients with dermatitis (ICD-9 692.9).

The American Contact Dermatitis Society

Founded in 1989, the mission of the American Contact Dermatitis Society is to promote, support, develop and stimulate information about contact dermatitis and occupational skin disease for improved patient care. Members include dermatologists, allergists, physicians, researchers, nurses and health care professionals.

The Society provides education, information and practical tools to aid physicians in their care of patients, and welcomes comments and questions relating to patch testing and contact dermatitis. Additional information is available at the ACDS Website: www.contactderm.org. To contact us email info@contactderm.org or call (386) 437-4405.

LIST OF REFERENCES

Anderson RT, et al.

Effects of allergic dermatosis on health-related quality of life.

Curr Allergy Asthma Rep. 2001; 1(4): 309-15.

Belsito DV, et al.

Patch testing with a standard allergen ("screening") tray: rewards and risks.

Dermatol Ther. 2004;17 (3):231-9. Review.

Cohen DE, et al.

Utility of standard allergen series alone in the evaluation of allergic contact dermatitis: a retrospective study of 732 patients.

J Am Acad Dermatol. 1997 Jun; 36(6 pt 1): 914-8

Dupont C.

Is your patch test really necessary?

Br J Dermatol. 2005; 153:842

Hoeck UL

More T.R.U.E Test allergens are needed.

J Am Acad Dermatol. 2005 Mar; 52 (3 pt 1)

Hutchings CV, et al.

Occupational contact dermatitis has an appreciable impact on quality of life.

Contact Dermatitis. 2001 Jul; 45(1):17-20.

Kadyk DL, et al.

Quality of life in patients with allergic contact dermatitis.

J Am Acad Dermatol. 2003 Dec; 49(6):1037-48.

Kadyk DL, et al.

Quality of life of patients with allergic contact dermatitis: an exploratory analysis by gender, ethnicity, age, and occupation.

Dermatitis. 2004 Sep; 15(3):117-24.

Katsarma G, et al.

Suspected fragrance allergy requires extended patch testing to individual fragrance allergens.

Contact Dermatitis. 1999 Oct; 41(4): 193-7

Larkin A, et al.

The utility of patch tests using larger screening series of allergens.

Am J Contact Dermat. 1998 Sept; 9(3): 142-5

Marks JG, et al.

North American Contact Dermatitis Group patch test results for the detection of delayed-type hypersensitivity to topical allergens.

J Am Acad Dermatol. 1998 Jun; 38 (6 pt 1): 911-8

Marks JG, et al.

North American Contact Dermatitis Group Patch-Test Results, 1998 to 2000.

Am J Contact Dermat. 2003 Jun; 14(2): 59-62

Militello et al.

The utility of the TRUE test in a private practice setting.

Dermatitis. 2006 Jun; 17(2): 77-84

Nettis E, et al.

Results of standard series patch testing in patients with occupational allergic contact dermatitis.

Allergy. 2003 Dec; 58(12): 1304-7

Pratt et al.

North American Contact Dermatitis Group patch-test results, 2001-2002 study period.

Dermatitis. 2004 Dec; 15(4):176-83

Rajagopalan R, et al.

The profile of a patient with contact dermatitis and a suspicion of contact allergy (history, physical characteristics, and dermatology-specific quality of life).

Am J Contact Dermat. 1997 Mar; 8(1): 26-31.

Rajagopalan R, et al.

Impact of patch testing on dermatology-specific quality of life in patients with allergic contact dermatitis.

Am J Contact Dermat. 1997 Dec; 8(4): 215-21.

Rajagopalan R, et al.

The use of decision-analytical modelling in economic evaluation of patch testing in allergic contact dermatitis.

Pharmacoeconomics. 1998 Jul; 14(1):79-95.

Rajagopalan R, et al.

An economic evaluation of patch testing in the diagnosis and management of allergic contact dermatitis.

Am J Contact Dermat. 1998 Sep; 9(3):149-54.

Rietschel RL.

Human and economic impact of allergic contact dermatitis and the role of patch testing.

J Am Acad Dermatol. 1995 33(5): 812-15

Saripalli YV, et al.

The detection of clinically relevant contact allergens using a standard screening tray of twenty-three allergens.

J Am Acad Dermatol. 2003 Jul; 49(1): 65-9

Scalf LA, et al.

Patients' perceptions of the usefulness and outcome of patch testing.

J Am Acad Dermatol. 2007 Jan 18

Sheretz EF, et al.

Patch testing discordance alert: false negative findings with rubber additives and fragrances.

J Am Acad Dermatol. 2001 Aug; 45 (2): 313-4

Simpson EL, et al.

Prevalence of botanical extract allergy in patients with contact dermatitis.

Dermatitis. 2004 Jun; 15(2): 67-72

Suneja T, et al.

Comparative study of Finn Chambers and T.R.U.E test methodologies in detecting the relevant allergens inducing contact dermatitis.

J Am Acad Dermatol. 2001 Dec; 45(6 pt 1): 836-9

Templet JT, et al.

Etiology of hand dermatitis among patients referred for patch testing.

Dermatitis. 2004 Mar; 15(1): 25-32

Thomson KF, et al.

Eczema: quality of life by body site and the effect of patch testing.

Br J Dermatol. 2002 Apr; 146 (4):627-30.

Woo PN, et al.

An audit of the value of patch testing and its effect on quality of life.

Contact Dermatitis. 2003 May; 48(5):244-7.