SelectHealth Medical Policies

Allergy, Asthma, and Immunology Policies

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Select Health

MEDICAL POLICY

FOOD ALLERGY TESTING

Policy # 261

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Disclaimer:
1. Policies are subject to change without notice.
2. Policies outline coverage determinations for Select Health Commercial, Select Health Advantage (Medicare/CMS), and Select Health Community Care (Medicaid/CHIP) plans. Refer to the "Policy" section for more information.

Description

Food allergy is a term that is used to describe adverse immune responses to foods that are mediated by IgE antibodies that bind to the triggering food protein(s); the term is also used to indicate any adverse immune response toward foods (e.g., including cell-mediated reactions). Food allergy is more common in infants/children (~6% under age 3 years) than in adults (~2%) and appears to be increasing in prevalence. Childhood food allergies to cow's milk, egg, wheat, and soy are most often outgrown (~ 85% by age 5 years) while allergy to peanut, tree nuts, and seafood are not commonly outgrown. Food allergy is partly genetically determined and often associated with a personal or family history of atopic disease.

With **food ingestion challenge testing**, the patient ingests the food to which sensitivity is suspected and the clinician observes symptoms and monitors signs related to allergic reactions. If double-blinded, both the patient and the physician are blinded. The double-blinded challenge is usually performed in the hospital or physician office where resuscitation equipment is available. The single-blind test blinds the patient and in the open challenge neither the patient nor provider is blinded. While the double-blinded challenge is the gold standard it is not often performed because of the expense and complexities of the test.

Provocative tests, also known as provocation-neutralization and serial dilution titration tests (P-N and S-D), are in vivo techniques which attempt to diagnose sensitivity by assessing the ability of a test dose to evoke symptoms and induced wheal growth. There are 3 variations of the testing, which differ in the route of administration for the test allergen: intacutaneous, subcutaneous, and/or sublingual.
These controversial techniques are employed primarily by clinical ecologists. In the P-N method, serial dilutions of each whole extract antigen dissolved in glycerin, phenol, or distilled water are administered intradermally. The goals of this method are: 1) to identify substances that provoke symptoms, and 2) to discover which dilutions of those substances are appropriate for treatment.

Empirically, it has been found that certain dilutions of an offending substance will provoke, while other dilutions will relieve variations of the patient's characteristic symptoms during a ten-minute test period after each dilution. The P-N method is applicable for a wide range of allergens: foods, pollens, dusts, molds, and chemicals. In the P-N method, the neutralizing dose is a symptom-relieving dilution. Both stronger and weaker dilutions can provoke symptoms. Thus, the dose response curve is often non-monotonic (i.e., biphasic). The P-N method may be used with wheal response alone, or in combination with symptom response.

A variant (presumptively, more useful in children) involves provocation through sublingual drops. With this approach, symptom provocation and neutralization are the only criteria for diagnosing sensitivities. Sublingual P-N is frequently used for testing food colorings and certain food chemicals and is frequently

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very effective for diagnosing sensitivities in hyperkinetic children. While there have been both positive and negative studies, the P-N technique enjoys wide clinical use. Due to its expense, patient time requirements (3 hours for 4 foods), and potential patient discomfort, the P-N is not a practical broad screening technique for foods, except in special circumstances.

The serial dilution (S-D) technique is similar to the P-N technique. This titration method uses wheal changes alone to identify, and then neutralize natural inhalants such as pollens, dusts, and molds.

COMMERCIAL PLAN POLICY/CHIP (CHILDREN'S HEALTH INSURANCE PROGRAM)

Select Health does NOT cover the following tests as current evidence, guidelines, and medical consensus clearly suggest these tests are **NOT** effective and safe for food allergy testing. These tests meet the plan's definition of investigational/experimental **(**this list is not all- inclusive).

- Provocative food testing (e.g., The Rinkel test, except for food ingestion challenge testing)
- Intradermal skin tests
- Total serum IgE (Allergen specific serum IgE testing is allowed)
- Elisa IgG testing
- Basophil histamine release/activation
- Lymphocyte stimulation
- Facial thermography
- Gastric juice analysis
- Endoscopic allergen provocation
- Hair analysis
- Applied kinesiology
- Provocation neutralization
- Allergen-specific IgG4
- Cytotoxicity assays
- Electrodermal test (Vega)
- Mediator release assay (LEAP diet)

SELECT HEALTH ADVANTAGE (MEDICARE/CMS)

Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS, and InterQual criteria are not available, the Select Health Commercial policy applies. For the most up-to-date Medicare policies and coverage, please visit their search website http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx?from2=search1.asp& or the manual website

SELECT HEALTH COMMUNITY CARE (MEDICAID)

Coverage is determined by the State of Utah Medicaid program; if Utah State Medicaid has no published coverage position and InterQual criteria are not available, the Select Health Commercial criteria will apply. For the most up-to-date Medicaid policies and coverage, please visit their website http://health.utah.gov/medicaid/manuals/directory.php or the Utah Medicaid code Look-Up tool

Summary of Medical Information

There are several settings in which physician-supervised oral food challenges are required for diagnosis of adverse reactions to foods. In general, when several foods are being considered as a cause of

Food Allergy Testing, continued

symptoms, tests for specific IgE are positive and elimination resulted in resolution of symptoms, then oral challenge testing for each food eliminated would be indicated to allow expansion of the diet. For severe reactions without evidence of food-specific IgE, a physician-supervised challenge would be indicated to re-introduce the food (in the rare case of a false-negative skin or RAST or suspected enterocolitis syndrome). If tests for specific IgE are not relevant to the illness, challenges may be the only means of diagnosis. Oral challenges are also an integral part of following patients likely to lose their clinical

reactivity to the food in question. Since skin tests may remain positive for years after clinical tolerance to a food is achieved, oral food challenges are often the only means to determine whether the allergy was "outgrown."

Oral challenges can elicit severe, anaphylactic reactions, and therefore, emergency medications and equipment must be available. Patients must avoid the suspected food(s) for at least two weeks, antihistamines must be discontinued according to their elimination half-life, and p-agonist therapy withheld for a relevant period before the challenge; patients should determine their baseline. For some diseases (for example, severe atopic dermatitis), hospitalization may be necessary to treat acute disease and establish a stable baseline before the challenge.

Challenges can be done openly with the patient ingesting the food, single-blind with the food masked and the patient unaware of whether the test food or placebo is given, or as double-blind, placebo-controlled oral food challenges in which neither patient nor physician knows which challenge of two contains the food being tested. In all these challenges, the food is given in gradually increasing amounts that may be individualized both in dose and timing, depending on the patient's history. Open- or single-blind oral food challenges can be very helpful, particularly in eliminating the food as a potential cause of symptoms.

These are best performed when there is little psychologic interplay that could bias results. When a false positive open challenge is suspected, or in a research setting, the double-blind, placebo-controlled oral food challenge is the "gold standard" for hypersensitivity. Challenge doses and timing can be adjusted to mimic the clinical history.

There are a host of tests that have been touted to be useful in the diagnosis of food hypersensitivity but that have never been shown to be useful in blinded studies. Such tests include measurement of IgG4 antibody. Additional unproven methods that should be avoided include provocation-neutralization (drops placed under the tongue or injected to diagnose and treat various symptoms), cytotoxicity testing (cell death observed subjectively on a glass slide containing foods), and applied kinesiology.

Billing/Coding Information

CPT CODES

Covered: For the conditions outlined above

95004 Percutaneous tests (scratch, puncture, prick) with allergenic extracts, immediate type reaction, including test interpretation and report, specify number of tests

95076 Ingestion challenge test (sequential and incremental ingestion of test items, eg, food, drug or other substance); initial 120 minutes of testing

95079 ; each additional 60 minutes of testing (List separately in addition to code for primary procedure)

Not Covered: For the conditions outlined above

95024 Intracutaneous (intradermal) tests with allergenic extracts, immediate type reaction, including test interpretation and report, specify number of tests

95027 Intracutaneous (intradermal) tests, sequential and incremental, with allergenic extracts for airborne allergens, immediate type reaction, including test interpretation and report, specify number of tests

Food Allergy Testing, continued

95028 Intracutaneous (intradermal) tests with allergenic extracts, delayed type reaction, including reading, specify number of tests

HCPCS CODES

No specific codes identified

Key References

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4. Middleton & Reed (editors). Allergy Principles and Practice, 5th Edition/98. Chapter 83 – Adverse Reactions to Foods. Referred to as "the authoritative text for allergic diseases" (Craig Moffat, M.D.).
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9. The American Academy of Allergy, Asthma & Immunology. Practice Paper: Current Approach to the Diagnosis and Management of Adverse Reactions to Foods. 10/2003.
10. The American Academy of Allergy, Asthma & Immunology and the American College of Physicians. Medical Knowledge Self-Assessment Program (MKSAP)/03. Section on Food Allergies, pp. 204–206. Referred to as "an authoritative review source for study and continuation education" (Craig Moffat, M.D.).
11. The Joint Task Force of the American Academy and College of Allergy, Asthma and Immunology will be publishing a "Practice Parameter" sometime in the next 12 months.

Select Health

MEDICAL POLICY

RAPID ALLERGY DESENSITIZATION

Policy # 441

Implementation Date: 4/22/10

Review Dates: 4/21/11, 6/21/12, 6/20/13, 4/17/14, 5/7/15, 4/14/16, 4/27/17, 7/25/18, 4/16/19, 4/6/20, 4/7/21, 3/10/22, 4/4/23, 4/9/24

Revision Dates: 4/17/19, 4/22/24

Description

A drug allergy, or an allergic drug reaction, is an adverse drug reaction that results from a specific immunologic response to a medication. Adverse reactions to drugs are common, and almost any drug can cause an adverse reaction. Reactions range from irritating or mild side effects such as nausea and vomiting to life-threatening anaphylaxis. A true drug allergy results from a series of chemical steps within the body that produce the allergic reaction to a medication. Often the first time the drug is taken, the immune system launches an incorrect response that is not noticeable. The next time the drug is taken, an immune response occurs, and the body produces antibodies and histamine.

Drugs that are well-known to cause IgE-mediated allergic reactions include penicillins, cephalosporins, and platinum-based chemotherapy agents (e.g., carboplatin, cisplatin, and oxaliplatin). Immediate reactions that are clinically similar and equally severe can also arise from non IgE-mediated activation of mast cells and basophils. These reactions are well described with taxane chemotherapy agents and vancomycin

Desensitization is a procedure that alters the immune response to the drug and results in temporary tolerance, allowing the patient with a drug hypersensitivity reaction (i.e., a drug allergy) to receive an uninterrupted course of the medication safely. Once the medication is discontinued, or if treatment is interrupted for a sufficient period, the patient's hypersensitivity to the medication returns. Desensitization is usually performed by starting with a 1/1000 to 1/100 dilution of the drug, which is used to administer an initial dose that is 1/10,000 of the full dose. Progressively greater doses of a drug are then administered in a stepwise manner, until a full therapeutic dose has been delivered.

Typically for IV desensitization, the dose is doubled at intervals of 15 minutes and a continuous infusion is maintained. Increasing the dose faster than doubling is not recommended. For oral desensitization, longer intervals may be required to assure complete absorption before increasing the dose, but long periods between doses may allow cellular desensitization to be reversed. Complications of desensitization usually consist of local and mild systemic allergic reactions during the desensitization procedure.

COMMERCIAL PLAN POLICY/CHIP (CHILDREN'S HEALTH INSURANCE PROGRAM)

Application of coverage criteria is dependent upon an individual's benefit coverage at the time of the request.

Select Health covers rapid allergy desensitization in *limited circumstances*. Current evidence shows this technology has shown proven benefits with certain medications.

Rapid Allergy Desensitization, continued

Conditions of coverage:

- Desensitization to a particular drug that is necessary to treat a condition which cannot be treated effectively with alternative medications; **OR**
- Insect sting (e.g., wasps, hornets, bees, fire ants) hypersensitivity; **OR**
- Members with moderate-to-severe allergic rhinitis who need treatment during or immediately before the season of the affecting allergy

Contraindications:

- Co-existent uncontrolled asthma
- Patients unable to comply with the immunotherapy protocol
- Patients with other immunological/medical diseases
- Children (< 5 years old)

Select Health does NOT cover rapid allergy desensitization for any other indication, including chronic urticaria, angioedema, or atopic dermatitis, as use in these circumstances is considered experimental/investigational.

SELECT HEALTH ADVANTAGE (MEDICARE/CMS)

Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS, and InterQual criteria are not available, the Select Health Commercial policy applies. For the most up-to-date Medicare policies and coverage, please visit their search website http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx?from2=search1.asp& or the manual website

SELECT HEALTH COMMUNITY CARE (MEDICAID)

Coverage is determined by the State of Utah Medicaid program; if Utah State Medicaid has no published coverage position and InterQual criteria are not available, the Select Health Commercial criteria will apply. For the most up-to-date Medicaid policies and coverage, please visit their website http://health.utah.gov/medicaid/manuals/directory.php or the Utah Medicaid code Look-Up tool

Summary of Medical Information

Limited systematic reviews are available, but several clinical studies have been performed showing the benefits of rapid allergy desensitization. In 2008, Castells et al. studied 413 patients with hypersensitivity reactions (HSRs) to chemotherapeutic drugs. Ninety-eight patients who had HSRs in response to treatment with carboplatin, cisplatin, oxaliplatin, paclitaxel, liposomal doxorubicin, doxorubicin, or rituximab received rapid desensitization to these agents. A standardized 12-step protocol was used, with treatment given intravenously or intraperitoneally. Initial desensitizations occurred in the medical intensive care unit, whereas most subsequent infusions took place in an outpatient setting. Safety and efficacy of the protocol were assessed by review of treatment records. Of the 413 desensitizations performed, 94% induced mild or no reactions. No life-threatening HSRs or deaths occurred during the procedure, and all patients received their full target dose. Most reactions occurred during the first desensitization. Reactions were most reported at the last step of the protocol. Desensitizations through the intravenous and intraperitoneal routes were equally effective.

Another study investigated the rapid inpatient/outpatient desensitization for chemotherapy hypersensitivity. They provided a 3-solution, 12-step protocol which delivered doubling drug doses by step, infusing the target dose over 5.8 h for inpatient and 3.8 h for outpatient administration. Fifty-seven consecutive patients who had moderate-to-severe HR to chemotherapy were evaluated for desensitization. All 57 patients successfully completed 255 courses of desensitization (127 to carboplatin, 114 to paclitaxel, and 14 to 4 other agents) where 16 patients received 51 courses in the outpatient setting (34 to carboplatin and 17 to paclitaxel). 225 courses (88.2%) were completed without any HR.

Rapid Allergy Desensitization, continued

Eighteen patients had breakthrough symptoms (BS) over 30 courses (11.8%) that were less severe than their initial HR. After management of breakthrough symptoms, these patients finished all 30 courses and tolerated subsequent desensitizations on a modified protocol. 21 of 26 patients (81%) with HR to carboplatin had positive skin tests to carboplatin. Cancer response to chemotherapy administered by desensitization was within the expected range after 1–3 years of follow-up. They concluded that rapid desensitization protocol was safe and effective in both the inpatient and outpatient settings and allowed appropriate patients with moderate-to-severe HR to continue chemotherapy. This study warrants the incorporation of the protocol into standard clinical practice.

For bee stings and associated insects, Sánchez-Morillas administered venom immunotherapy to 48 patients allergic to bee or wasp venom, by means of a rush immunotherapy protocol (3 days) between 1998 and 2003. They observed no severe adverse reactions in any patients. Twelve patients developed only local reactions at the site of injections that did not require any pharmacological treatment. Two patients experienced mild systemic reactions consisting of diffuse urticaria on day 3. Both adverse reactions were treated with intravenous antihistamines. Their experience confirms that rapid venom immunotherapy is safe and should be considered in every case especially for patients during the stinging insect season when a rapid protection is required.

In conclusion, rapid allergy desensitization has shown effectiveness for patients who need a regimen of medication that they are normally unable to take due to allergic reactions.

Billing/Coding Information

Covered: For the indications outlined above

CPT CODES

95180 Rapid desensitization procedure, each hour (e.g., insulin, penicillin, equine serum)

HCPCS CODES

No specific codes identified

Key References

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Rapid Allergy Desensitization, continued

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