

Diagnosing and Treating Reflex Sympathetic Dystrophy

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The following are important steps in locating biomedical literature. Each step has been customized to retrieve the maximum information with a search related to the diagnosis and treatment of reflex sympathetic dystrophy (RSD).

Databases: Looking in the right place for information is not always a simple task. There are many databases with differing strengths and weaknesses depending on the subject matter of the search. Searching the right database(s) will minimize cost and maximize the finding of desired information. Primary database selection(s) for this subject is Medline and ChiroLars; a secondary database is Embase.

Search Strategy: The Medical Subject Headings (MeSH) developed by the National Library of Medicine are the words used for indexing and searching most biomedical databases. Some databases supplement these words (headings/subheadings) with additional terms which are specific to the biomedical information which they cover. There are three steps to building your search strategy:

Step 1: Find those MeSH and/or supplemental terms related to the subject matter which you wish to retrieve. Headings related to the diagnosis and treatment of RSD are: reflex sympathetic dystrophy; pain; referred pain; and causalgia. Some modifiers, or aspects of RSD (subheadings) are: etiology; diagnosis; physiopathology; drug therapy; and therapy.

Note: The word "treatment" is not a MeSH term, so we have substituted the word "therapy" which is a Medical Subject Heading. One key to searching for biomedical journal articles is to familiarize yourself with some of the MeSH terms. For more information on acquiring a Medical Subject Heading list, contact the National Library of Medicine at 1-800-638-8480.

Step 2: Optimize your search by using specific terms from step 1. The terms reflex sympathetic dystrophy, diagnosis, therapy, and drug therapy are sufficient for the search at hand.

Step 3: Formulate the terms you have chosen into a question using Boolean arguments with words like and, or, not. The Medline or ChiroLars search for the diagnosis and treatment of reflex sympathetic dystrophy could be structured as follows: reflex sympathetic dystrophy "and" diagnosis "or" therapy "or" drug therapy. This argument will supply the searcher with all of the desired articles dealing with the diagnosis and therapy of RSD. Take note that by using "or" arguments the articles retrieved need not contain all four search terms, only the heading "reflex sympathetic dystrophy" and one of the three remaining MeSH terms.

Using these search terms and arguments a large number of quality articles were located that relate specifically to the therapy and diagnosis of reflex sympathetic dystrophy. I have three abstracts here for your review. The first two journal articles deal with methods of diagnosing reflex sympathetic dystrophy. The last article covers the diagnosis and different modalities of therapy for RSD.

Becker, S: Infrared imaging of reflex sympathetic dystrophy. Topics in Diagnostic Radiology and Advanced Imaging SPR 1993; 1(1): 25-8.

Reflex sympathetic dystrophy (RSD), along with causalgia, traumatic dystrophy, Sudeck's atrophy, shoulder/hand syndrome, and other similar clinical descriptive terms, belong to a category of peripheral pain syndromes more recently termed collectively as sympathetic maintained pain (SMP). These conditions characteristically include clinical features of constant burning pain, hypersensitivity (allodynia), sudomotor and vasomotor disturbances and frequently tropic changes over the affected extremity. Thermography has been shown to be of particular value in the evaluation of RSD in establishing an early diagnosis monitoring the relative effects of treatment. Selected cases of RSD are presented to illustrate the various patterns of vasomotor dysfunction as imaged with infrared technology.

Bryan, A; Klenerman, L; Bowsher, D: The diagnosis of reflex wymphathetic dystrophy using an algometer. Journal of Bone and Joint Surgery 1991; 73B: 644-6.

Thirty-three patients with reflex sympathetic dystrophy were studied prospectively to ascertain the pressure/pain threshold of affected and unaffected limbs. The affected side had a lower threshold which was found to be statistically significant. In all 18 patients with upper limb involvement, the pain threshold was reduced on the affected side, but this applied to only 11 of the 15 with leg involvement. This difference may be because patients with lower limb symptoms had been referred later in the course of the syndrome. We showed by repeated tests that after an average of 49 days, there was a slow return to normality. The estimation of pressure/pain thresholds may help in the earlier diagnosis of reflex sympathetic dystrophy.

Barrett, J: Reflex sympathetic dystrophy: recognizing a cause of chronic pain. The Physician and Sports Medicine 1995; 23(4): 51-8.

Reflex sympathetic dystrophy (RSD) is an unusual pain syndrome that can arise after athletic injuries such as sprains, strains, or fractures. Classic signs (burning pain, edema, and vasomotor instability) are present in varying degrees, making the diagnosis of RSD difficult. Three case studies demonstrate typical findings. Treatment consists of early, aggressive physical therapy, adequate pain relief, and corticosteroids when appropriate. Sympathetic blockade is useful for diagnosis and therapy. Early protected range of motion for treating injuries often helps prevent RSD.

Access to literature can be easily made from any clinic with the use of a personal computer and an ordinary telephone line. Information access is becoming a crucial skill to cope with the proliferation of journals and the ethical and medicolegal demands of practice in the 90s.

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