



A Solution for a Chest Pain Dilemma

By William L. Russo, M.D., FACC
The Stern Cardiovascular Center

In the practice of cardiology, we see a rainbow of patients with various chest pain syndromes. Many, indeed, do have coronary atherosclerosis and respond to the usual modes of treatment including medical therapy, angioplasty, stenting, and bypass surgery. For the cardiologist, this is the easy part of practice. Some of those patients, who have no heart disease and continue to complain, turn out to have esophageal irritation, stomach ulcers, and even gallbladder disease. So far, these problems are not really that hard to find and to treat.

On the other hand, there is the patient in whom, despite a bunch of expensive and slightly risky cardiac catheterizations and endoscopies, the pain continues to bring the patient back. Many times, repeating these tests seems to be the best way to go only to wind up with the same answer. These patients with chest pain of undetermined etiology will go from doctor to doctor or from emergency room to emergency room in an almost desperate attempt only to get relief.

How many times have we seen the patient who has all classic symptoms of angina but has little if any coronary artery disease? Many of us can recall the middle-aged woman (less common in men) who complains of heaviness in her chest. This can be associated with shortness of breath, weakness, nausea, and sweating. Many times this comes on at rest, but can be aggravated by exertion or even normal activity. There may also be sharp pain with a pleuritic component, which is not all that uncommon. Careful dissection of the history cannot be over emphasized in trying to analyze this problem. This syndrome is often accompanied by fear or anxiety. Countless patients with these symptoms fill the emergency rooms around the country.

This particular patient often has the addition history of minor complaints including fatigue, non-restorative sleep, inability to deal with the stresses of life, weight gain, and no energy to exercise.

Many of these individuals develop a cardiac neurosis, are given anti-anxiety medications, and get hooked. A few are even told by their physician that they do have heart disease and are given beta-blockers and nitrates. Even though there is no ischemia, some do, undeniably, improve. A number can be so affected that they are unable to work and somehow get on the disability payroll. They become so inactive, gain weight, and take on more of the appearance of the classic patient with the real thing, i.e., coronary artery disease. As their symptoms drive them to return to centers for medical care, their presentations are often more impressive. Again, the cycle of testing is repeated and more health care dollars are used only to wind up with what appears to be a healthy person, who has pain for no particular reason. Even though no disease is present, those shots of morphine and dilaudid and those pills of percocets, lortabs, and vicodins are effective. Should these patients be committed to a life of hard drugs with all the baggage they can carry?

So where is this leading us? Should we continue to provide endless prescriptions to keep these patients quiet and out of the hospital?

Before we go any farther, there is still an entity that is not often identified even by the finest and most experienced physicians. This disorder is common and, fortunately, is not a health danger. However, even though it is benign, it is one that is often quite difficult to control, even to the point of using the

occasional narcotic.

You may think I'm a Charlatan and that I am imagining that this entity is important. If it is causing many to have a miserable or less than comfortable existence and if it is a drain on our health care dollars, it is something that needs controlling. It may not be as exciting as treating an acute MI, but the symptoms of chest wall pain can be severe and do impact the lives of many.

This is an inflammatory disorder. Careful examination of the patient will reveal tenderness, often severe, of portions of the chest wall. This can be any where on the chest and due not just to the old diagnosis of costochondritis we all learned in medical school – a malady many of us have dismissed as something “that I’ll never see.” You may also recall Tietze’s syndrome, which is another vague and almost obsolete term in this day of digital technology.

The cause of this ailment is, itself, also even more vague. Many patients cannot recall any chest trauma, although movements of the chest and/or arms often aggravate the discomfort. It just begins and usually runs an indolent course, when looked at retrospectively. The patients often recall a syndrome of malaise, fatigue, and even a feeling that they may have had for some time. This sensation can be felt in the chest, but is not perceived as a pain...not until its intensity reaches that painful threshold that brings the patient to medical attention.

Clearly it is not a cardiac pain, which is proved by a negative cardiac workup and the presence of chest wall tenderness. There is a false concept that is still in the textbooks, which states that if the pain the patient feels is reproduced by palpation, then the pain is due

to the chest tenderness. However, many of these patients complain of a heavy sensation on the chest, but pressing on the chest gives a much more intense pain than that of pressure. Below, I will describe a procedure that quickly stops this sensation with relief of the heaviness and tenderness.

Over my thirty years of practice, I have developed more sensitivity in identifying and an ease of working with patients with chest wall pain. I have yet to find a real cause for this problem, but have discovered that such patients often tend to have a syndrome not unlike fibromyalgia. Many with chest wall pain are tender in other places, have poor sleep, are fatigued, and can't tolerate exercise, to mention a few similarities.

One of the other symptoms of chest wall pain I have discerned is breathlessness or the inability to draw in a satisfying breath. This is due to the soreness of the chest wall that limits inspiration and even makes it uncomfortable to breath. Many patients complain of shortness of breath or simply state, "I can't breathe."

The symptom that still is concerning is the quality of the chest discomfort. Tightness, heaviness, fullness, and even squeezing sensations are truly ones that should grab the physician's attention and immediately alert him that the patient has ischemic chest pain. However, in those who have been found not to have coronary disease either by stress testing or by more invasive measures, this type of chest distress is still there and is bothersome. If the patient has recurrence and returns to the ER, more money will be wasted on tests, many of which had been completed in the recent past.

The bottom line is not that the patient has no cardiac pain or has no gastrointestinal disorder, but that the patient wants to feel normal and wants to avoid wasting time in the hospital. Therefore, relief is the goal in this group of patients.

Along that same line, if there is something we can do to stop the pain by giving something other than nitroglycerine, this needs to be done.

Almost thirty years ago when I started practice and was challenged with this patient type, I began to try a treatment that is described deep in several medical texts. No teacher in medical school and no attending physician or senior resident ever mentioned this form of therapy.

After seeing a number of these patients early in my practice, I started and still continue to use a most beneficial and simple treatment

modality. This method is also helpful in diagnosis in that if the heaviness, tightness, squeezing, and even the breathless quickly improve or totally resolve, this pain is not ischemic in nature. Indeed, within seconds of administering the medicine, the fullness, heaviness, tightness, or squeezing began to wane. After a day or two, the patients begin to have more energy, have much less chest pain, sleep better, breathe better, and are able to tolerate many of the activities, which had previously made them feel terrible.

So what is this treatment? It is something any physician can perform in the office or even in the hospital. It is the injection of a local anesthetic and a long acting corticosteroid directly into the tender spot. My method is to first put on protective gloves. Use of sterile ones is not necessary. While the patient is lying supine with the center or affected parts of the chest exposed, an alcohol swab is used to wash the areas to be treated. Ten cc's of 1% Lidocaine with a 27-gauge is used first. I instill one cc of this solution per sore spot (there are usually at least ten tender sites). I relocate the first tender spot (usually starting at the lower left sternal border) and inject a small portion of that first cc to make a skin wheal. This is slightly painful. Then I direct this very short needle down to the cartilage or rib and infuse the rest of that one cc. The patient will note more discomfort for only a second or two. The degree of this discomfort is proportional to the amount of tenderness at that particular spot. I will proceed to inject more areas as I go up the left sternal border and then up the right side. Many times I have also found that the xiphoid process to be quite tender. I try to inject this also.

After the ten spots are numb, I take a one cc syringe with one cc or 40 mgs of Depomedrol, also with a 27-gauge needle, and inject 0.1 cc in each of the spots. A spot Band-Aid is used to cover each of the injected locations.

In some cases, when fewer than ten sore areas, I will evenly divide both medications among the treated spots.

I tell each patient that the Lidocaine will last about an hour and that the soreness will return. It may be similar or even less than before the series of shots. However, after 24-48 hours, the anti-inflammatory effects will lessen the pain. Most patients, but not all, return to a normal or almost nearly normal existence.

There is a variable duration of effect from patient to patient. Most will have recurrence of the pain within about three to four weeks, but this can vary one way or the other. Most often, I have had to re-inject such patients about every three to six weeks. I have a large

number of individuals who have been getting these injections over long periods, some for as long as fifteen years or more. Their lives are often remarkably changed for the good. Often times, when they return for their next visit, they state they have come back because they want those shots. While the shots were working, they claim the pain was better, breathing was easier, there was more energy, and sleep was more restful. But now, all those feelings are back, and many almost demand I go directly to the injections even before I take the blood pressure and do the examination.

Despite this degree of relief, there are still a few patients who require medications to augment the injections. These individuals either need chronic analgesics or help from pain specialists.

One last note that has impressed me is the change in pre and post injection number of hospitalizations and cardiac tests. I have had many patients who went through frequent hospital encounters with all the cardiac catheterizations and stress tests. They missed work, became depressed, and were destined for an endless, miserable existence. After they began getting regular chest injections, the trend reversed.

With this simple form of therapy, if is used properly, a segment of our patient population will actually get the product for which they come to the doctor.

WG

About The Author

William L. Russo, M.D., FACC. Dr. Russo has been a member of The Stern Cardiovascular Center for thirty-years. He is a native of Clarksville, Tennessee where he attended Austin Peay State University before he went to medical school at the University of Tennessee in Memphis. He practices clinical cardiology and is the director of the echocardiography lab at The Stern Cardiovascular Center. Dr. Russo can be contacted at 901-271-1000.

