Muscle Pain, Post-Polio and The Importance of Being a Medical Detective

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A 70 year old female patient, whom I will refer to as RA, presented to me with widespread pain, generalized fatigue, and muscle weakness. She had a history of hypothyroidism along with polio as a child which had left her with a residual of right lower extremity weakness. There was also a history of underlying depression. Her only meds were Synthroid, and Zoloft. The pain had started about 3 years prior to her seeing me, but was finally reaching the point where she felt it needed to be investigated. She also noted a decrease in strength which manifested as increased difficulty with walking and getting up from a chair. This was separate from her chronic right leg weakness. The differential diagnosis was extremely broad, but as a rheumatologist, my job is to be a medical detective.

The process starts with a complete history and physical exam, looking for evidence of an underlying etiology.

There are several parts to obtaining a medical history. First, I ask all kinds of questions relevant to the patient's major complaints, in this case, pain and weakness. When and how did RA's symptoms start? Was the onset gradual or sudden? Was her pain muscular or joint related? Had she experienced any joint swelling? Was the illness limited to the musculoskeletal system or was it part of a bigger picture? These were just some of the questions that needed answers as I attempted to narrow down the diagnostic considerations.

The next step is the patient's past medical history. Are there other conditions that might relate to what she is experiencing now? Examples might include a prior diagnosis of cancer, which would raise concerns of recurrence as a cause of her symptoms, or a history of sexual assault which could be a clue to fibromyalgia. Is she taking any other medications such as Lipitor which can cause muscle pain and weakness? Is there an underlying history of any arthritic conditions? Is she up to date with her cancer screenings? All of these questions further help to define the possibilities. RA's history was unremarkable except for the thyroid disease and depression which were already areas ripe for questioning. In doing so, I learned that both were generally stable entities, and were not likely playing a role in her current symptoms.

I also routinely go through a complete review of systems, looking for other symptoms not specifically related to why the patient came to see me, which might provide a clue. Symptoms such as excessive thirst or urination, might steer me towards diabetes. Blood in the stool, a breast lump, or a history of smoking might be a clue to an underlying cancer. And so on.

RA's physical exam revealed normal joints. She had diffuse muscle tenderness and she did indeed have difficulty getting out of a chair. Strength testing revealed some deficits beyond the chronic right leg weakness from the aforementioned polio. Physical exam was otherwise not particularly helpful.
After the history and physical, the physician must determine what blood work, imaging, and other studies are necessary. X-rays are rarely helpful in a case of widespread pain, but labs can provide significant clues towards an underlying etiology. RA's blood count, urine, and chemistries were normal as were her thyroid studies. Markers of inflammation, which if elevated can suggest an underlying systemic disease, were normal. Given her complaints of weakness, I checked muscle enzymes looking for muscle damage. They were also normal. I was left with a patient with various complaints, but no specific evidence of an active disease.

It is very easy to write patients like this off. Patients are often labeled as having either depression, anxiety, or fibromyalgia, or they may be told, "It's all in your head." After all, if I can't find an etiology as a

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physician, it must not be present and the patient must be either imagining it or making it up for attention. Frankly, I find that attitude to be the height of arrogance. Fortunately, it is the exception rather than the rule.

Fibromyalgia (FMS) is a specific diagnosis which is often made as a diagnosis of exclusion in patients with widespread pain and fatigue. Labs are normal, and there are no objective findings on exam other than tender points in a characteristic distribution. There is often a history of depression or anxiety and it is amazing how many times patients report a history of sexual or physical abuse (if the physician asks about it). Patients with FMS do not have objective weakness as RA did. Furthermore, her tenderness did not fit the characteristic distribution. FMS remained a possibility, but RA's presentation was not classic.

Patients with widespread pain often have underlying psychosocial issues. RA was being treated for depression, but my sense was that this was not playing a role in her current symptoms. Again, depression should not cause objective loss of strength. Patients such as RA often get discounted and shuttled off to the psychiatrist with the idea that "there is nothing really wrong with them." I have often maintained that the one thing a physician can do for every patient regardless of what they may or may not find on evaluation is to validate the patient's suffering, even if the physician does not know why it is present.

So now what? Thyroid disease and depression were off the table as were underlying forms of arthritis and systemic diseases like diabetes. Should I treat her for FMS even though it was not a classic presentation? Should I recommend that her meds for depression be changed, which would be beyond the purview of a rheumatologist. Should I get more invasive tests such as a muscle biopsy even though her labs were normal, also keeping in mind that myopathies are usually painless? These are the kinds of decisions physicians must make on a daily basis, as we weigh the risks and benefits of potential actions.

My patient asked me if her polio could be playing a role. As a rheumatologist, I had very little knowledge of post-polio syndrome, so I could not discount it as a possibility. I could not tell her yea or nay, so I decided to follow her to look for other developments. Over time, illnesses that were not present at the initial visit can declare themselves. In the meantime, I did some reading on post-polio syndrome and sent her for physical therapy. As I saw RA at subsequent visits, I got to know her better. It became clear that depression absolutely was not the issue and that she did not have fibromyalgia. Follow up blood work was also unrevealing. In the absence of a firm diagnosis, I opted not to treat her medically for any condition such as FMS that I did not think she had. I certainly was not about to put her on pain killers. I never made a firm diagnosis on RA and it was ultimately presumed that her symptoms were due to post-polio syndrome. I learned from my reading that this can look very much like hypothyroidism, fibromyalgia, or even an underlying cancer. It is critical that entities such as these are excluded. There is no specific test to prove this diagnosis, so it becomes a diagnosis of exclusion in the right circumstances. Patients typically present many years after the diagnosis of polio with the gradual onset of widespread pain, fatigue, and/or progressive weakness. There may be other symptoms such as cold intolerance. They may have difficulties with breathing, walking, or swallowing depending on which muscles are affected. The key factor in this case was objective weakness. I did not have much to offer her medically, but what was important was that I excluded other conditions and did not expose her to the risks of treatment for conditions she did not have.

The most important thing I could offer RA was validation. I listened to her, engaged her, and excluded a multitude of diagnostic possibilities. As it turned out, that in and of itself proved to be of significant benefit to her. I can honestly say that even though I did not treat RA medically, I helped her. As a physician I can't always resolve the issue, but one thing I can always do is care for and about my patients. Sometimes the caring is more important than the curing.

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