Family Practice Grand Rounds

Functional Bowel Syndrome, Pheochromocytoma, or Demonio?

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DR. WILLIAM C. FOWKES *(Head, Division of Family Medicine)*: There is a tendency for all physicians to confuse their role of healer with that of scientist. Most of us pride ourselves on our knowledge and the spectacular tools we have at our finger tips as a result of the molecular, biological revolution. Because of the power of these skills that we have learned, we try to apply them at times in inappropriate circumstances. No one denies the value of antibiotics or other significant advances such as computer-assisted tomography. However, on occasion, scientific skills are not needed in the role we must assume as healer. The medical model is limited.

Many people we see in the ambulatory setting are not infected or suffering from problems definable in genetic or molecular terms. They have problems of living. We are not, however, very good at recognizing this; nor are we skilled at dealing with these problems. So what do we do? More of the same, that is, usually more tests, medications, and the like, because we are comfortable with these interventions. We are trying, however, to be more adept at being healers, and much has been written about a more inclusive model—the biopsychosocial model—as a more useful framework from which to approach the world of healing. Even this more comprehensive scheme, though a much more relevant model, has its limitations.

The case presentation today illustrates some of the limitations inherent in the medical and biopsychosocial approaches. I would like to introduce, Dr. Phillip Mac, who will present the patient for discussion.

DR. PHILLIP MAC *(Chairman, Department of Family Practice, San Jose Hospital)*: The patient today presented with a complaint of abdominal pain and nervousness. The history of the present illness began in October 1982. This 21-year-old Puerto Rican woman came into Evergreen Family Medicine Center with a two-month history of epigastric pain, which occurred initially several times a day with no relief from any simple measures. She believed that the pain was made worse with food, and she began to eat less because of pain. She reported episodes of constipation and diarrhea that were not associated with blood or with change in the caliber of her stools. She stated (at that time) that she thought she had lost a few pounds in weight, but she was not sure. Physical examination was unremarkable.

She was seen on a weekly basis until January 1983 for continuing abdominal pain, which varied considerably in location and severity. She was treated with a variety of medications, including intensive antacids for possible peptic problems, but she was also suspected of having an infectious diarrhea. Stool cultures were obtained but were always negative. During this time the results of a gastrointestinal series were negative, as were the results of a gall bladder series. A trial of cimetidine gave no relief of her symptoms.

Laboratory work during this period was unrevealing. Her white blood cell count was 6.8 $\times$ $10^3/\mu L$, red blood cell count was 5.49 $\times$ $10^6/\mu L$ with a hemoglobin of 15.1 g/dL and hematocrit of 45.1 percent. Her differential count was normal; no eosinophiles, monocytes, or basophiles were

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noted. Her serum chemistries revealed calcium of 9.5 mg/dL, phosphorus of 3.7 mg/dL, and cholesterol of 159 mg/dL. Her alkaline phosphatase was slightly elevated at 115 IU/dL with upper limit of normal at 100 IU/dL. Liver enzymes including serum glutamic oxalacetic transaminase, lactic dehydrogenase, and serum glutamic pyruvic transaminase were all within normal range. Serum glucose was 108 mg/dL and T_4-triiodothyronine resin uptake, and free thyroxine index were normal.

After approximately six visits to the clinic for recurring abdominal pain, she sought consultation from a local internist. The internist saw her in February of 1983 and related that she complained of two types of abdominal discomfort: (1) a postprandial epigastric pain that occurred daily in the evening and lasted for a few hours, and (2) an intermittent episodic lower abdominal pain in addition to gastric burning and bloating. She stated that her bowel function was normal and denied diarrhea. The internist's review of the studies to that date revealed nothing new, and the workup at that time was felt to be completely normal. Though he noted a 12-lb weight loss between October and January, the patient had regained some of that weight. His physical examination revealed a blood pressure of 120/72 mmHg, weight of 105 lb, and resting pulse of 120 beats/min. He related that she was a bit anxious at that time.

After that initial visit he recommended a high-fiber diet, and she was told to return for further workup. The manipulation of her diet did not seem to aid in her pain, and he tried a variety of medications including generic propantheline, which did not seem to help, generic dicyclomine, which caused her dizziness, and occasionally generic acetaminophen (Tylenol) with codeine. Physical examination on February 17 again showed a pulse of 120 beats/min and some right lower quadrant tenderness, but a normal physical examination otherwise. Additional laboratory work showed a normal complete blood count with differential, normal urinalysis, free thyroxin index of 4.4, three negative examinations of the stool for occult blood, two negative stool cultures, and a normal total triiodothyronine by radioimmunoassay (T_3RIA). Because of persistent right upper quadrant pain, the oral cholecystogram was repeated on March 23, and it was also thought to be normal.

The internist saw the patient for the last time on March 28 and stated that she was slightly improved, but now her pain was in the region of her pelvis. She consulted a gynecologist, who reported a normal examination. During this period the patient also had been checking her pulse at home on a frequent basis, and it ranged from 100 to 130 beats/min with no irregularities noted. At that time she was no longer taking any medication. The last examination by the internist revealed a pulse of 136 beats/min with the remainder of the examination normal. Because of persistent tachycardia, he repeated her T_3RIA, which was again normal. He considered a diagnosis of pheochromocytoma, but the patient was unable to afford a complete workup because she was not able to obtain health insurance and was paying for everything out of her pocket.

Her next visit to my office was delayed three months because of her inability to obtain medical insurance. At that time she still complained of episodic palpitations and abdominal pain. She continued to monitor her pulse at home, and it was consistently over 100 beats/min. Physical examination on June 18 revealed a nonanxious, fairly placid young woman appearing her stated age of 21 years. The resting pulse was 100 beats/min after 10 minutes of rest and the blood pressure was 130/86 mmHg. It was felt necessary at this time to rule out the issue of pheochromocytoma, and serum catecholamines were measured. The results were all normal: norepinephrine 140 pg/mL, epinephrine 50 pg/mL, and dopamine less than 10 pg/mL. For symptomatic relief she was started on generic nadolol, a beta blocker, at a dose of 40 mg/d. Within the next six weeks she continued to have symptoms even though her pulse was less rapid. She felt tense, anxious, and was becoming much more worried about her symptomatology.

DR. WILLIAM C. FOWKES *(Head, Division of Family Medicine)*: This case illustrates conscientious and appropriate application of the medical model in terms of differential diagnosis, workup, and management, all of which was unsuccessful for this patient. Although psychosocial factors have been considered to a certain extent in this patient's care, the biopsychosocial model had not been applied effectively to this point.

DR. MAC: Further history revealed that as a child she was chronically ill with multiple upper respiratory tract infections. She also had several

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procedures done for bilateral eostropia. She stated that she was always ill during her childhood, but she denied any serious illness. She has been employed as a dental assistant for the past five years and has missed little work during this time. Born and raised in San Jose, she has always lived with her parents, along with her two sisters, aged 26 and 24 years. She is a nonsmoker, nondrinker, and does not take over-the-counter drugs or recreational drugs. Occasionally she has taken generic ibuprophen, 400 mg, for headache. She is a regular exerciser, and rides her bike two to three times a week. Her parents were born and raised in Puerto Rico, arriving in the United States approximately 30 years ago. They have lived within a few blocks of the same location since that time.

Her father is 56 and mother 53 years old. The father is alive and well with no significant medical illnesses, although the patient states that he had a drinking problem when in Puerto Rico. There are a total of three sisters and two brothers in the family. The brothers, aged 28 and 29 years, are married and do not live at home. Both are alive and healthy. The two older sisters live at home with the parents, and a 39-year-old sister is married and lives out of the house. There are no other familial illnesses or diseases, and no evidence of depression or anxiety in any other member of the family.

The function of the family throughout the patient's development has been significant. They maintain an extremely rigid household, very religiously oriented, one that has required the parents to be very strict. The daughters living at home are not allowed to date except with an escort, a brother, the father, or male companion of the family. There is not only a curfew, but forced bedtime at 11 PM for all the children, including the 29-year-old daughter. Their meals are separate, with mother and father eating first and children afterward. The family has little community contact. There has been a long history of physical disciplinary action with all children, which included beatings, separation, and isolation from the family for minor transgressions. Needless to say, a significant amount of physical and psychological stress exists among all the children. The patient is the youngest and over the past few months has been most vocal in raising objections to the status quo.

DR. FOWKES: Based on this history, there are ample reasons why this woman should have symp-

toms, and indeed most of us would make a psychosocial diagnosis at this time and intervene. But, as you will see, there is a totally unsuspected aspect of this case that was elicited through a sensitive, culturally appropriate approach by the provider of care. To start this part of the discussion, I would like to introduce Dr. Elois Berlin.

DR. ELOIS BERLIN *(Assistant Professor of Family Medicine)*: Up to this point in our case presentation we have dealt with the biomedical model including the psychosocial issues. Each health care provider constructed a theoretical model for the explanation of the cause of the patient's symptoms and then tested it. Patients also go through the same process of generation and testing of explanatory models.[1,2] The patient's explanatory model may not be at all similar to the provider's; sometimes it is a straight biomedical model, and sometimes it isn't. Culture is one of the variables influencing the models patients construct.

I would like to give you an example of alternative explanatory models based on my research in Peru, where I worked with a group of Indians called the Aguaruna. The Aguaruna accept Western medicine and the biomedical model as an explanation of some of their diseases. As one old shaman told me: "Of course your medicines work for some things. They are your diseases. Before the Christians came (remember that priests also came with the conquistadores), we had only diseases that were caused by witchcraft. But when you came, you brought all those other diseases and your medicine can treat them."

In the Aguaruna medical system, witchcraft diseases are caused either by someone shooting a magical substance into a person who then becomes ill, or by a spirit called a *pasuk* being sent to make a person ill. The Aguaruna believe pasuk exist around people all the time. Most people cannot see them, as pasuk are visible only to a shaman when he is in a trance state, which he achieves by taking hallucinatory substances. Each shaman has one particular pasuk who will befriend him and is his helper either in curing or in bewitching. So if the shaman is going to bewitch someone, he goes into a trance and sends off the pasuk, which hovers above the victim's head, invisible of course. When the victim eventually dies, the pasuk simply moves to another victim. It is the worst kind of bewitching because it is not limited to one person. When that person dies, it moves to another and to another and to another. What am I describing?

A PHYSICIAN: An epidemic.

DR. BERLIN: An epidemic, yes. When the Aguaruna think this is happening, assuming another shaman has not been called in soon enough to get rid of the pasuk, they go about their ordinary business but store travel goods outside the community. When it is dark, they sneak away into the forest, leaving the unsuspecting pasuk behind. What is that?

A PHYSICIAN: Quarantine.

DR. BERLIN: Yes. An epidemic of this sort actually happened while I was in Peru. The Summer Institute of Linguistics, or some of you may know them as the Wycliff Bible Translators, a missionary group, flew some nurses into the village where the epidemic was taking place. The people were just at the point of leaving, and the nurses kept trying to get people to stay. "We think it is a virus. Please stay here and let us treat you." Well, the Indians did not agree and dispersed into the forest.

Now I would like someone to explain to me why a virus would be a better explanation than pasuk.

A PHYSICIAN: It's the same thing.

DR. BERLIN: Right. How do we know that viruses exist? They are here around us all the time. The average person cannot see them. As with the Aguaruna, we have special people who use special technique to see viruses. So what seems to be a very bizarre story has internal consistency and logic. What we are arguing is the need for the physician to learn what the patient thinks is going on, to discover the patient's explanatory model. As that's not a normal part of the clinical interview (the SOAP format—S for *subjective,* O for *objective,* A for *assessment,* and P for *plans),* I developed a mnemonic by which people might enhance their ordinary skills in interviewing—LEARN: the L for *listen* with sympathy and understanding to the patient's perception of the problem, E for *explain* your perception of the problem, which is normally the biomedical or psychosocial model, A for *acknowledge* and discuss the differences and similarities, R for *recommend* treatment, and N for *negotiate* agreement.[3] Obviously one would not use all these questions at any given time, but these are questions that can serve as sort of memory joggers during an interview with the patient.

DR. MAC: The remainder of this history was obtained six to eight months after we started work-

ing with the patient. We began to try a new dimension. I spent some additional time with the patient and learned that her mother is alive and well but has had chronic problems with nervousness, irritability, and short-temperedness, which the patient's mother referred to as a condition called *nervios*. She got the children to behave by saying, "If you don't behave, you may cause my death." The mother has insisted on many occasions that the daughter was suffering from nervios, and that nervios was her main physical problem. Medical expenses and medications were really useless in this type of condition, as in their cultural tradition there was no cure for nervios; once you got it, it became a part of living.

It is also significant that the house they are living in, which they have occupied since before the patient's birth, is thought to be haunted by demons. The patient has been one of the family members who has been constantly exposed to the demons most often. The parents try to negate the impact of the spirits possessing the house, but have related on many occasions that the demonio is the cause of the patient's distress and that they are overtaking her because of her inappropriate behavior, namely, fighting the family system. If she tries to overrule the father's rules (curfews and bedtime), he says that she is possessed, which is the reason for her behavior. The family has held several prayer meetings in the house to exorcise the dwelling place.

The patient related episodes of seeing spirits in the house and told of certain activities that have been performed by the spirits. These activities occur less frequently when more members of the family are around. Specifically, the spirits interrelate a lot with her; for example, if she were sitting on the couch, she could see them sitting beside her on the couch. I am sure that everybody is feeling skeptical, but remember that the patient is still a fairly well-adjusted young woman who works, and who, by all our concepts, is functioning normally except for her physical complaints.

At this point I began working with her in a more humanistic vein, concentrating on her nervios. I had no way of relating to demons, so I decided to work in an area where I was comfortable and tried to build on her strengths. I taught her some relaxation exercises and worked with her on building up her own strengths and independence, formulating what she felt to be the major part of the problem (mainly the family situation) and supporting her in carrying out what she wanted to do. After about a month or so, she left home, got an apartment with one of her other sisters, and became completely symptom free. Her pulse came down to normal without medication, and she was feeling well.

DR. BERLIN: Actually we have two alternative explanatory models in this case: (1) the mother's nervios, which incidently is widespread among Spanish-speaking and Portuguese-speaking populations,[4] and (2) the patient's explanatory model involving demonic spirits, whose presence have been confirmed and reinforced over the years by her parents, affecting the patient especially when she behaved in an inappropriate manner. These demons not only caused her present symptoms, but provided her with a solution to the family problem. She was able to move out of the house and leave the demons without having to reject her family.

This case presentation provides a good example of using the LEARN model to complement the regular SOAP or biomedical model. The patient was allowed to discuss openly the explanation for the cause of the symptoms the family had used, the L in the LEARN mnemonic. The physician then discussed issues of stress in family relations and her need for independence, the *explain* part of the LEARN mnemonic; he related this to the cultural context of the family belief system, which *acknowledged* the similarity and difference in explanation and why they occur, and *recommended* relaxation techniques and sympathetic nervous system control plus working through the family relations (*negotiation* between the two models). The patient incorporated both the therapeutic recommendations and the culturally derived explanatory model and removed herself, first, from the demons and, second, from a stressful situation.

DR. MAC: This complex case continues to unfold. About two weeks ago, the patient came back to the office complaining once again of pain. Her pulse rate was again elevated. I think, for whatever reason, there is more information that has not yet surfaced. Having had the opportunity of seeing this woman over a long period has helped me put this whole situation into perspective. There are more parts of her story that have yet to come out, and I have the advantage family medicine offers for longitudinal care. As long as she knows that I

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am willing to work with her and not pass her off as chronically mentally ill, demonically possessed, or just needing a prescription for medication, as long as we know there is a cooperative effort, then time is on our side.

Over a period of time, a relationship develops between the physician and the patient in which the LEARN model can be applied more effectively and more information may come out that has either been repressed or for whatever reason is slow to surface.

We are becoming increasingly aware that there are onion-skin layers to this process. The psychosocial has been well delineated in recent literature. We are now being trained to deal with that level, especially with depression and anxiety. As we heard today, there definitely is another level—the cultural level.

As this case illustrates, treating a physical illness without considering the patient's culture may have significant limitations. By attempting to cure this person physically without taking into consideration first the psychological and the cultural, the management plan failed. The patient demonstrated this point by her resentment at being raised in the old way, but the old way is part of her. Although she cannot disassociate herself from her past, she now has a set of values that are totally different and that have an impact on her psychological and physical makeup.

In summary, the more the physician can derive from the patient, the more he or she becomes capable of dealing with the patient as a whole person. Even small amounts of time spent on the patient's cultural background and psychological makeup are well worth the effort.

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