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# News

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"...they faint on hill or field or river..." - Alfred,  
Lord Tennyson, The Princess

"If thou faint in the day of adversity thy strength is  
small." - Proverbs 24:10

DALLAS--The woman entered the emergency room complaining of chest pain and shortness of breath.

After a brief examination, the intern noted that the patient was highly anxious, had low blood pressure and an irregular heart beat. The doctor gave her a dose of tranquilizers to calm her "hysteria." He then admonished her about "drinking too much coffee and Coke" and sent her home. Five years ago this was a fairly common occurrence, but now physicians are recognizing that another diagnosis is possible.

Women treated with tranquilizing drugs for high anxiety--both in hospital emergency rooms and doctors' offices--may not be neurotics as they are labeled, says a Dallas researcher.

Dr. Drew Gaffney, instructor in internal medicine at the University of Texas Health Science Center at Dallas, is conducting a study with young women who have been diagnosed as having a heart condition known as mitral valve prolapse. Working with Dr. Gunnar Blomqvist, professor of internal medicine and physiology, he is looking into the effects of physical training on the victim's symptoms. Such diverse institutions as the National Institutes of Health and the Texas Heart Association are funding mitral valve prolapse research.

"Mitral valve prolapse," said Dr. Gaffney, "has the same symptoms that are often associated with hysteria--chest pains, palpitations, shortness of breath, anxiety, dizziness or fainting spells and excessive fatigue."

The condition is called a "syndrome" because it is not one complaint, but a whole complex of symptoms. The prolapsing of the valve occurs when the heart's main pumping chamber, the left ventricle, is contracting to send blood through the aorta to the rest of the body. The mitral valve is supposed to prevent blood from flowing back toward the lungs, but in this syndrome it leaks. This leads to sounds that the physician can diagnose with a stethoscope.

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first add mitral valve prolapse

The valve can be compared to a parachute with chords too long for the size of the canopy. The tendon-like chords stretch too far, the valve balloons back out of place and the whole thing springs backward with a snap. When this happens, the "floppy" valve leaks. This allows some of the blood to rush back into the left atrium. The sound of the snap of the chords and the leakage can be heard by the physician with a stethoscope and permit a diagnosis. Why the collapse of this valve in the heart causes the symptoms often associated with emotional disturbances no one seems to know, said the researcher.

To complicate the problem, these patients, like the woman branded "neurotic" in the emergency room, don't know they have the illness. Neither can doctors always recognize it easily.

"The condition is very difficult to diagnose at times, even for the experienced physician," he said. "The one telltale sign or signature of the syndrome, the sound of a 'click' followed by a murmur of the heart, isn't always present."

It can sometimes be provoked by certain procedures so the physician who suspects mitral valve syndrome should put the patient through a series of exercises like the ones the researcher uses in the lab to bring out the symptoms. While Gaffney listens to the subject's heart, he has her stand, squat and stand again. These quickly executed movements cause the blood to rush downward into the legs and make the heart size decrease while the chords in the valves become relatively longer. Thus the physician has a better chance of hearing the characteristic "click-and-murmur."

There are also certain physical clues that seem to point to the presence of mitral valve prolapse. A larger percentage of patients are tall and thin and frequently have such abnormalities as a slight curvature of the spine and/or inwardly curving chest. The doctors feel that these shared characteristics may be indications that the defect is associated with a growth or developmental problem, as does Jim Schutte, project research technician. Schutte is a physical anthropologist who studies physical growth and the factors which influence them.

Although many people may have mitral valve prolapse syndrome, not all are symptomatic. However, there is some danger in not knowing you have the condition, according to Gaffney.

"The person with mitral valve prolapse syndrome is at risk as far as infections in the valve go," he pointed out. "A woman who has to have a tooth pulled, some types of surgery--or even childbirth--should probably be put on antibiotics to guard against infection in those vulnerable areas."

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second add mitral valve prolapse

Some investigators think mitral valve prolapse may be present in up to eight percent of women, but the full-blown syndrome is substantially less common. And not only is the disease more prevalent in women, but it is most often found in young women. In fact, symptoms most commonly appear around puberty and often disappear by the time the patient reaches 50.

In a few very rare instances, death does occur in the person with mitral valve prolapse. Around five were reported in the Dallas area within the last year or so. It is a sudden-death syndrome, due to ventricular fibrillation of unknown cause.

The most insidious problem facing the patient on a day-to-day basis, however, is coping with the symptoms. Sometimes the pain can be quite severe. Even when it is not, said Gaffney, having irregular heart beats, dizziness and tightness in the chest may be a frightening experience. Thus this fear intensifies the anxiety, and the patient may become extremely upset, even when the cause of the symptoms is known.

Drs. Blomqvist and Gaffney, who became interested in the syndrome because of a friend who is afflicted, think physical training on a regular basis may be an answer to some of these patients. In order to see if training will alleviate or lessen symptoms of mitral valve prolapse they are putting their patients on individual exercise plans. Some of the young women are jogging, swimming, biking or working out at health studios.

"We give them a choice of what they would like to do," said Gaffney. "We work up a prescription for conditioning for each of the young women in the study. We are also looking at how well they can train on their own and how this training affects the results of research tests given in the exercise lab."

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