A NEW CENTURY OF HEALTH
Buddhism and the Art of Medicine
Kidney Disease [24]

Participants in this installment: SGI President Ikeda, Soka Gakkai Doctors Division Chief Shuhei Morita, Vice Secretary Akihiro Tojo and Kanagawa General Prefecture Doctors Division Vice Secretary Shosaku Narumi.

Ikeda: In Japanese, a common expression for "crucial importance" (*kanjin*) is written with the Chinese characters for *liver* and *kidneys.* This is said to derive from the fact that our liver and kidneys together form a vital source of the body's energy and vitality. They are, of course, included among the five internal organs of prime importance in traditional Chinese medicine.

Morita: That's true. Traditional Chinese medicine stresses five main internal organs: the heart, the liver, the lungs, the spleen and the kidneys. The liver and kidneys are regarded as especially important organs.

Ikeda: That's how something of "crucial importance" came to be denoted in Japanese by a combination of the Chinese characters for those two vital organs. And it is probably because our kidneys have an especially indispensable function that we have two of them — that way, if one kidney fails, we have a spare. Today, we have kidney specialists Dr. Akihiro Tojo and Dr. Shosaku Narumi with us. I look forward to your contributions to our discussion.

Tojo and Narumi: We're very glad to be here.

Ikeda: Let's begin then. Is there any easy way to know if the kidneys are malfunctioning?

Tojo: Yes. We can judge the health of our kidneys, at least to a certain extent, by our urine.

Ikeda: Even in ancient Greece, I understand, the state of a person's urine was regarded as a sort of barometer of health, wasn't it? One way it was tested in those days, I believe, was to stir it with a piece of straw and see how viscous it was. If I'm correct, the founder of Western medicine, Hippocrates, also wrote about irregularities in the urine.

Tojo: Yes, he did. He said that urine that was pale or formed a froth indicated some disorder.

Ikeda: Are those statements true even from the perspective of modern medicine? Granted, of course, that we shouldn't jump to hasty conclusions based on our self-diagnosis.

Narumi: Healthy urine is clear and light yellow. Just because it seems pale does not necessarily mean anything is wrong.

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Ikeda: I see. How about foam?

Tojo: When foam stays on the urine for a long time, it can mean that protein or glucose is mixed with it, and that is a warning sign.

Narumi: Still, after vigorous exercise or when running a fever, even healthy people may have protein in their urine.

Ikeda: What about the presence of blood in the urine?

Tojo: Well, it is rare to find urine so bloody that it is bright red. In some cases, urine containing blood is brown, like tea. But often blood in the urine cannot be detected with the naked eye.

Ikeda: What diseases can cause blood to be in the urine?

Tojo: Many diseases can do this, including acute and chronic nephritis [inflammation of the kidneys], kidney stones, or cancer of the kidneys or bladder.

Ikeda: What about cloudy urine?

Narumi: Cloudy urine indicates a urinary tract infection [i.e., an infection in any part of the urine-collecting system, which can involve kidneys, bladder, etc.].

Ikeda: Can there be a problem when the amount of urine is small?

Narumi: A sudden, dramatic decrease in urine can signal acute renal [kidney] failure. A large amount of urine, on the other hand, can be a sign of diabetes mellitus, diabetes insipidus, or chronic nephritis.

Ikeda: Some people seem to be bothered by a frequent need to urinate.

Narumi: That can be a sign of cystitis [inflammation and infection of the bladder] in women, or of prostrate enlargement in men, particularly if the latter are middle-aged or older.

Tojo: Most cases of cystitis are accompanied by the urge to empty one's bladder, even if you have just done so, or a need to urinate frequently, at intervals, say, of less than two hours.

Morita: In many older men, enlargement of the prostate gland, which is located at the exit of the bladder, constricts the passage of urine so that it takes longer to urinate and often causes them to wake up in the middle of the night needing to urinate.

Ikeda: The kidneys are the body's "urine-producing factory," eliminating its waste products. How do they work?

Tojo: About one-fourth of the blood being pumped out of the heart passes through the

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kidneys. That amounts to about 400 gallons a day. The kidneys filter out waste products from the blood and produce about 40 gallons of filtrate in a 24-hour period.

Ikeda: That's quite a large amount! 40 gallons — that's the amount it takes to fill a steel oil drum, right?

Morita: If we had to eliminate 40 gallons of urine each day, we'd have to spend the entire day in the bathroom!

Narumi: Yes. Of the water filtered from the bloodstream by the kidneys, only about one percent — around 2.5 pints — is urine. The remaining 99 percent of water and nutrients, which are essential to the body, are recycled by the kidneys and returned to the bloodstream.

Ikeda: Ninety-nine percent is recycled? What an efficient factory! How do the kidneys filter the blood to produce urine?

Tojo: First, the kidneys filter the blood through the biological filter of the glomerulus, a cluster of microscopic capillaries. Each kidney has about a million glomeruli, as these blood vessels are known individually.

Ikeda: Where does the term *glomerulus* come from?

Morita: It is Latin for "in the form of a ball." The glomeruli wind together to form a ball-shaped cluster.

Tojo: The glomerulus produces the filtrate, which is then concentrated more than a hundred times in the renal tubules.

Narumi: While the filtrate is passing through the renal tubules, the reusable 99 percent — for example, water, amino acids, sodium and glucose — is reabsorbed for recycling through the walls of the renal tubules.

Ikeda: The living organism that is our body wastes nothing. To the furthest possible extent, it tries to make the best use of everything. It isn't recklessly wasteful. It always seeks to produce value in its own marvelous fashion. It is truly awesome.

This drive to create value is none other than life force. And one of the reasons we practice Nichiren Daishonin's Buddhism is to strengthen our life force. By the way, do the kidneys have any other functions?

Narumi: In addition to their function of ridding the body of wastes, they help preserve the proper balance of sodium and water in our bodies and regulate our blood pressure. They also secrete erythropoietin, a hormone that is important in the formation of hemoglobin and red blood cells, and the metabolically active form of vitamin D, which helps the body absorb calcium.

Ikeda: They certainly have many different functions, don't they?

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Morita: Yes, indeed. These small, bean-shaped organs, each of which is only about the size of a person's fist, play a vital role in preserving a constant, balanced internal environment in our bodies — in other words, homeostasis, our electrolyte balance and the concentration of water and sodium.

Ikeda: The kidneys are hard workers. You mentioned earlier that they play a role in controlling blood pressure, I believe.

Tojo: The kidneys secrete a hormone that regulates blood pressure. Also, when kidney function deteriorates, it can lead to improper excretion of excess water and sodium, which are then retained in the blood vessels. This retention contributes to high blood pressure.

Ikeda: People say that when your kidneys aren't working well, it shows in your complexion.

Narumi: Yes. That's because when a person's kidneys aren't functioning well, they are likely to suffer from anemia. The bones also become more brittle. These are the results of the kidneys' failure to produce erythropoietin and the metabolically active form of vitamin D, which contribute to blood production and bone formation, respectively.

Ikeda: The kidneys are vital in a wide variety of bodily functions. From ancient times, they have been regarded as the storehouse of vital energy. And there is considerable truth to that belief. Since they are so important, any damage to the kidneys affects all the other organs and severely disables the entire human body.

Tojo: Precisely.

Ikeda: What kinds of kidney diseases are there?

Morita: Well, for starters there are acute and chronic nephritis.

Tojo: Most cases of acute nephritis are triggered by colds. Just about when cold symptoms such as a sore throat and fever have receded, the eyelids and extremities swell. The amount of urine may suddenly decrease, or blood may appear in it. Blood pressure also rises.

Narumi: Even healthy people will experience swelling in the feet or ankles if they stand for a long period of time. But when swelling can be seen first thing in the morning, it may be a sign of illness.

Morita: Swelling is a symptom of several illnesses in addition to kidney disease, including heart disease and cirrhosis of the liver.

Ikeda: What is the cause of acute nephritis?

Narumi: The most common cause is bacterial infection of the glomerulus, which impairs its function.

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Morita: Most kidney diseases are the result of some problem affecting the glomerulus. The glomerulus fails to filter out fairly large particles, such as proteins, as it normally would, and allows them to pass into the urine.

Tojo: Fortunately, with appropriate treatment acute nephritis can be cured.

Ikeda: How about chronic nephritis?

Tojo: It, too, is caused by various malfunctions in the glomerulus, according to which it is categorized into different types of disorder. And unfortunately, sometimes, the causes are not clear.

Ikeda: The symptoms are the same as acute nephritis? Protein and blood in the urine, swelling, and so forth?

Narumi: Yes. But the condition progresses slowly, so the person is almost always unaware of it. Most patients learn they have the disease only during a regular checkup. The kidneys and liver are often called the silent organs. By the time we notice that something is wrong, the disease is usually far advanced. That's why regular medical checkups are so important.

Ikeda: In the past, it was believed that chronic nephritis could never be cured.

Tojo: There are two types of chronic nephritis — one that does not progress very much and one that does. The former often heals on its own. But if the second type is left untreated, it may result in renal failure, in which the kidneys nearly cease to function.

Ikeda: Renal failure necessitates dialysis, doesn't it?

Tojo: Yes, or a kidney transplant. But in Japan, dialysis is by far the most common treatment. It places a great burden on the patient, who must undergo four- to five-hour dialysis sessions two or three times a week.

Tojo: The knowledge that this treatment must continue for the rest of one's life takes a heavy toll mentally and emotionally as well.

Ikeda: Nothing is more painful than illness, and nothing is more precious than health. I hope that all who endure such suffering will say to themselves, "I will definitely get better!" and focus constructively on what they can do now, in their present state. For example, if they can't work as others do, they can concentrate on deepening their inner selves, so that they live profound and inspiring lives. They can become examples for others, so that others will say, "I want to live my life with the kind of spirit that they do."

When that is your goal, you are living a truly healthy life, whether you are suffering from illness or not. It is also important that co-workers, friends and neighbors encourage and support someone battling illness.

Morita: Those suffering from kidney disease need a relaxed pace, free of stress and tension.

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Ikeda: What other kidney diseases are there?

Tojo: Nephrotic syndrome is another common one. The cause is not yet known, but malfunctions in the glomerulus cause the passing of large amounts of protein in the urine and severe swelling [edema].

Narumi: Recently, in Japan, we have seen a significant and disturbing increase in diabetic nephropathy — abnormal changes caused to the kidneys as a result of long-standing diabetes mellitus. The capillaries of the glomerulus malfunction, and the kidneys no longer filter properly. As a result, much protein is passed in the urine, and renal failure can occur.

Ikeda: There are also kidney stones to worry about.

Tojo: Yes. Kidney stones are formed when the contents of the urine cement into small particles as hard as stones. Similar stones can also form in other parts of the urinary tract, including the ureter, bladder and urethra, for example.

Ikeda: They say nothing is more excruciating than the pain caused by such a stone.

Morita: Stones obstructing the ureter, the thin tubular portion connecting the kidneys and bladder, can be especially painful, causing severe pain from the back to the waist. So, in short, yes, stones can be excruciating. And they can also cause blood to appear in the urine.

Narumi: Drinking plenty of water and getting the right amount of exercise are good ways to prevent the formation of stones.

Ikeda: What should we know about preventing and treating kidney diseases?

Tojo: In our daily lives, three things can badly affect our kidneys: 1) colds, 2) exhaustion and stress, and 3) chills.

Narumi: As we mentioned earlier, a cold often triggers acute nephritis or its reoccurrence. Exhaustion, stress and chills hamper the circulation of blood in the kidneys.

Tojo: Sufficient rest and staying warm are very important, as are maintaining a healthy routine that will increase our resistance to infections. Going to bed at a reasonable hour and getting enough sleep are also crucial.

Ikeda: How about exercise?

Tojo: Kidney diseases can raise the blood pressure, so strenuous exercise should be avoided, particularly by the elderly.

Morita: Monitoring blood pressure is indispensable in preventing and treating kidney disease. High blood pressure places an extra burden on the kidneys, so it is important to

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control it.

Narumi: There is a strong connection between kidney disease and conditions such as high blood pressure and diabetes. Weight control is also an important factor for preventing kidney problems.

Ikeda: What should people with weak kidneys pay attention to as far as diet is concerned?

Tojo: First, they should reduce their salt intake. Too much salt can lead to water retention and raising blood pressure.

Narumi: Reducing protein intake is also a good idea — remembering, of course, that the body needs protein and one shouldn't reduce it too much.

Morita: Treatment of kidney diseases is usually long term, and it differs depending upon the type of illness and the severity of the symptoms. The best thing is to consult your physician.

Tojo: I know I am repeating myself, but one can't overemphasize the importance of regular medical examinations, including urine tests.

Ikeda: At the beginning of our discussion we mentioned the five internal organs. Buddhism links these five internal organs to the five elements. The ancients of the East categorized all things in terms of the five elements of earth, water, fire, wind and void. And Nichiren Daishonin said that the five elements are the five characters of the title of the Lotus Sutra.

In the Gosho, the Daishonin writes:

> Now the entire body of Abutsu Shonin is composed of the five universal elements of earth, water, fire, wind, and *ku* [void]. These five elements are also the five characters of the daimoku [Nam-myoho-renge-kyo]. (*The Major Writings of Nichiren Daishonin*, vol. 1, p. 30)

A life based on the Mystic Law, a practice where faith equals daily life, makes all parts of the microcosm that is our individual life, including our five organs, function soundly and vibrantly. The path of the Mystic Law is the fundamental path to health and to happiness.

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