

Rheumatology in Japan, Germany, and Egypt: A Comparison of Medical Practices

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Summary. The doses of methotrexate used for the treatment of patients with rheumatic arthritis were compared among hospitals in Germany, Egypt and Japan and were found to be much higher in the former two than in Japan. German physicians have begun to use drugs yet to be approved in Japan, such as IL-1 receptor antagonist, mycophenolate mofetil, and Cox-2 inhibitors as well as weekly therapy with bisphosphonates. The anti-TNF α antibody, the soluble TNF α receptor construct, and leflunomide, all of which were recently approved in Japan, have been widely used in Germany. In Egypt, a rheumatologist is usually called “a rheumatologist and rehabilitation doctor.” This doctor does not perform surgery (as orthopedic surgeons do) but does treat many orthopedic patients, such as those with back pain or osteoarthritis of the knee. It is important to understand the international situation in rheumatology and to let the world know the strengths of Japanese rheumatology, especially the treatment options developed in Japan.

Key words — rheumatology, Japan, Germany, Egypt, medical practice.

INTRODUCTION

It is important to understand the clinical situations in countries outside Japan in such areas as the health insurance systems, treatment options, medical education systems, and ethnic differences in diseases ^{1,2}. We have reported differences in clinical practices of rheumatology between Japan and North America ². Briefly, hospitalization is very expensive in North America; therefore, treatment of rheumatoid arthritis (RA) patients is generally on an outpatient basis. North American rheumatologists admit RA patients only under special conditions such as the development of vasculitis. In Japan, there are internal and orthopedic rheumatologists (internists and orthopedists trained in rheumatology), however, in North America, every rheumatologist is an internist. In 1997, members of the Japanese Society of Internal Medicine numbered 79,301, and members of the Japanese Orthopedic Association numbered 19,828. Registered rheumatologists in the Japan Rheumatism Foundation numbered 3,682, comprising 2,550 orthopedists, 913 internists, and 643 other physicians. Therefore, in Japan it is mainly orthopedists who treat RA patients. In the USA, there are about 100,000 internists. About 3,000 of these internists are rheumatologists (according to Dr. J. Fiechtner, personal communication). Methotrexate (MTX) was approved for treatment of RA by the

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Abbreviations— ANCA, anti-neutrophil cytoplasmic antibody; MTX, methotrexate; RA, rheumatoid arthritis.

Ministry of Health and Welfare in Japan in 1999, but it was approved by the Food and Drug Administration in the USA in 1988. In Japan, the approved dose is 8 mg/week, whereas in the USA, MTX is administered at 20 to 25 mg/week.

I studied both in Germany and in Egypt in September and October 2002 through the support of the Pfizer Health research Foundation. The following is a personal summary of the education of medical students and rheumatologists, clinical practices in rheumatology such as the use of disease modifying anti-rheumatic disease drugs (DMARDs), clinical practices in nephrology, cooperation between internal and orthopedic rheumatologists, and the relationship between university hospitals and rheumatic centers. I will discuss my observations and experiences in Germany and in Egypt and include a comparison of practices in Japan. Because I visited only a few institutions, I will not attempt to generalize all the differences between Japan, Germany, and Egypt, but I hope to provide insight into the international practice of rheumatology.

GERMANY

Institutions in Germany

In Germany, I observed clinical situations at the Department for Internal Medicine of the Clinic for Rheumatology, Bad Bramstedt (Bad Bramstedt Rheumatic center: inpatients), and at the Department for Internal Medicine of the Clinic for Rheumatology, University of Lübeck, (outpatients). I attended clinical rounds and meetings, and I visited the outpatient ward as well as clinical and research laboratories at both institutes. In the Department of Orthopedics at the University of Hamburg, I observed special orthopedic practices. At the Universities of Lübeck and Hamburg, I also studied hemodialysis and renal transplantation. At the University of Lübeck, I had the opportunity to visit the Department of Pathology and discuss the education of medical students.

Health insurance system in Germany

About 89% of the population in Germany is required to buy public health insurance; this segment of the population has an income of less than 40,032 Euro per year. Nine percent of the population has private health insurance. Private health insurance usually pays 2.3 times the benefits of public health insurance, but the amount depends on which family member is being treated, the age of that family member, and his/her

medical history. In special cases, it pays 3.5 times. The German government changed the healthcare system in 1996 to decrease medical costs. Now, 75% of hospitals are reimbursed for the number of patients hospitalized per day, and 25% have introduced a diagnosis-related group prospective payment system (DRG/PPS). The DRG/PPS will cover all inpatients at all hospitals by January 1, 2007. Prescription of drugs by their generic names has been introduced. Germans pay 11 to 14% of their income for public health insurance. The fee for visiting doctor's during a three-months period, is equivalent to 10 US dollars. Germans pay about 4 US dollars for every prescription (actually 4 US dollars per package). Therefore, TNF blockers are not expensive. The costs of a private policy may vary depending on the age and disease history of the subscriber, but TNF blockers are not more expensive for the holders of private policies.

In Japan, the diagnosis procedure combination (DPC) system was implemented in 2003, involving university hospitals and some specialty centers (82 hospitals). In 2005, the DPC system was introduced as a trial in 62 additional hospitals. Despite the Japanese health insurance, TNF blockers cost subscribers about 200-400 US dollars per month.

Bad Bramstedt Rheumatic Center

The Bad Bramstedt Rheumatic Center was built at a spa³⁾ and can be compared to the Heinola Rheumatic Center in Finland, which is also located at a spa. The Rheumatic Center of Niigata Prefectural Senami Hospital was also based on the Heinola plan⁴⁾; therefore, the atmosphere is very similar to that of the Bad Bramstedt Rheumatic Center. Both of the rheumatic centers are located in a rural area. Patients are usually admitted for a period of weeks in Senami, but only for seven to 11 days at Bad Bramstedt. Both of the institutions have a close working relationship with a university hospital. However, the Bad Bramstedt Rheumatic Center is much bigger (about 650 beds) than Senami Hospital (150 beds). The Bad Bramstedt Rheumatic Center includes in more disciplines (internal medicine, orthopedics, neurology, rehabilitation, and pediatrics). Doctors in training for internal medicine rotate from the University of Lübeck, and those in training for orthopedics rotate from the University of Hamburg. The heads of internal medicine and orthopedics are professors at Lübeck and Hamburg, respectively, and they work several days a week at Bad Bramstedt. There are also outpatient wards at the center. Patients are referred for admission from the universities to the center. Patients who have undergone surgery at the University of Hamburg are

also referred for rehabilitation. In addition, since the Department of Internal Medicine is famous for the treatment of all forms of systemic vasculitis and anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis, especially Wegener's granulomatosis (WG), patients are referred from all over Germany. Patients are sent to the University of Lübeck for renal biopsy, cardiac catheter investigation, or magnetic resonance imaging. Further, they are transported to the University of Kiel for ophthalmologic care, ear-nose-throat care, or dental work, by a bus owned by the Bad Bramstedt Rheumatic Center.

As reported earlier elsewhere, there are ethnic differences in diseases. Many patients with WG, ankylosing spondylitis, temporal arteritis, or fibromyalgia are admitted to the Bad Bramstedt Rheumatic Center; however, Takayasu's arteritis and reactive amyloidosis in RA patients are rare in Germany. For treatment, I was surprised at the broad use (for many diseases) of MTX. The doses of MTX were much higher (up to 0.3 mg/kg) than in Japan and similar to doses used in the USA²⁾. In contrast, only 13.4% (262/1954) of Japanese rheumatologists prescribe more than 8 mg/week of MTX⁵⁾. However, since official approval of MTX for RA by the Ministry of Health and Welfare in 1999, 197 patients have died, possibly due to the side effects despite the low approved dose (8 mg/week)⁶⁾. Perhaps the Japanese are more vulnerable to the side effects of MTX, so it should be asked whether MTX induces similar side effects in other Asian countries. However, MTX is sold under different names in Asian countries other than Japan and Thailand; therefore, it is very difficult to assess usage and side effects in these countries. In Thailand, a dose of MTX at 7.5 to 20 mg/week is approved for RA; 20 mg/week would not ordinarily be exceeded.

In Germany, patients are given an injection of MTX once a week and take an oral equivalent dose of folic acid 24 h later, which may be a reason for the relatively low toxicity of MTX observed in Germany. MTX is also used routinely for the treatment of childhood arthritis (in Japan, use of MTX in children is still controversial). A pediatric rheumatologist in Germany told me that since the introduction of MTX, he no longer sees pediatric patients with joint deformity or short stature. German physicians have begun to use drugs that are not approved in Japan. These include the IL-1 receptor antagonist, mycophenolate mofetil, and Cox-2 inhibitors as well as weekly therapy with bisphosphonates. The anti-TNF α antibody, the soluble TNF α receptor construct, and leflunomide, which were recently approved in Japan, are widely used in Germany. The criteria for the use of TNF blockers in

patients with RA include a definitive diagnosis of RA and active disease despite the use of MTX and at least one other DMARD (not necessarily in combination) for at least six months (each).

Disease activity in patients with RA is well controlled in Germany. I rarely saw a patient under continuous treatment with a C-reactive protein level over 1 mg/dl, nor did I often see RA patients with severe joint deformities. Of course, there are disabled RA patients in Germany. Very disabled patients live in homes or institutions for the aged and disabled (in German: Altersheime und Pflegeheime). It would seem that adopting the treatment approaches that are used in Germany would serve to prevent joint deformity and development of reactive amyloidosis. However, because of potential toxicities due to genetic differences in the Japanese, the careful and controlled introduction of new medical therapies is advisable. A new DMARD, leflunomide, was introduced in Japan to be used at the same dosage as in Western countries. However, no phase III clinical trial was conducted. Unexpected deaths were reported due to interstitial lung disease; this is seldom observed in Caucasians⁷⁾.

For the treatment of vasculitis, I have reached similar conclusions. For some unknown reason, however, patients in Japan with myeloperoxidase (MPO)-ANCA related vasculitis are especially vulnerable to the side effects of immunosuppressants. The guidelines of the Japanese Society of Nephrology for the treatment of MPO-ANCA-positive, rapidly progressive glomerulonephritis are very strict because of the risk of infection⁸⁾. In the case of elderly patients or patients on hemodialysis, the recommended therapy is only 0.6-0.8 mg/kg/day of prednisolone.

There are three areas of rehabilitation treatment at the Bad Bramstedt Rheumatic Center: internal medicine, neurology, and orthopedics. This seems to be ideal for many diseases. In Germany, there are many rehabilitation hospitals, but at least one internist usually works at each of these hospitals to control underlying conditions such as atrial fibrillation, hypertension, hyperlipidemia, and diabetes mellitus.

In the Department of Rheumatology, University of Lübeck, and at Bad Bramstedt Rheumatic Center, both clinical research and basic research are conducted. The investigations include a long-term prognosis in cases of vasculitis: comparison of maintenance therapy for WG by leflunomide vs. MTX, standardization of the ANCA-based diagnostic system, and the significance of bactericidal/permeability increasing protein (BPI)-ANCA. Basic scientists supervise young medical doctors in their basic research. A primary effort is the education of patients at the Bad Bramstedt Rheumatic Center. Three lectures are given for patients weekly:

1) on medical treatment (immunosuppressive drugs); 2) on connective tissue diseases, and 3) on vasculitis. These lectures are conducted by doctors, nurses, and psychologists.

Orthopedic Department at the University of Hamburg

In Germany, as in Japan, there are internal rheumatologists and orthopedic rheumatologists. Surgery for RA is done mainly at the Bad Bramstedt Rheumatic Center. At the University of Hamburg, I studied in the Tumor and Spinal Diseases Division. Because I am an internist, I was not interested in surgery itself. I chose instead to investigate the life of orthopedic surgeons. In Japan, the number of general surgeons is decreasing, perhaps due to overwork⁹⁾. Young surgeons in Japan perform duties which nurses or technicians do in Western countries⁹⁾. The number of orthopedic surgeons is increasing, but not all orthopedic surgeons actually perform surgery. Many orthopedic surgeons are trained as surgeons; but they open their own clinics and perform only conservative therapy. According to an inquiry of general surgeons in 13 university hospitals and general public hospitals in Japan, 18.1% of the doctors in university hospitals serve on the night shift more than ten times per month⁹⁾. Twenty-three percent of doctors in general public hospitals work everyday, including holidays, for one month. More than two-thirds (40.7%) of these doctors wrote that they came close to making a serious medical mistake because of loss of concentration due to overwork⁹⁾. In Germany, one orthopedic professor replied that our situation sounded like it in Germany ten years ago. He said that the government passed a law to increase the number of doctors. Some doctors were against the law because it meant that their income would decrease, but most doctors welcomed it, reasoning that too much hard work without rest would cause them to make medical mistakes. In Germany, doctors are required to leave the hospital after working the night shift. They are called to the hospital at night in emergency situations, but they must go home the next day. Surgeons do not take care of patients after surgery; doctors in the intensive care unit care for surgery patients. Therefore, young surgeons do not have to work from the time before surgery to the next morning. The working hours of doctors in Germany should not exceed 38 h per week. However, according to an investigation reported by the journal of society of the German doctors (2000), working hours of residents and assistants respectively average 40-50 h per week (according to the Society of Presidents of the Hospitals) and 70-80 hours (according to the Hamburg Society of Doctors).

University of Lübeck (Outpatient Rheumatology Clinic)

I was surprised by the low number of rheumatology outpatients at the University of Lübeck. The reason there are so few is that rheumatologists at the University of Lübeck see only new and referred patients almost restrictively. They interview and examine patients with enough time to decide on the appropriate treatment. At Niigata University, the number of rheumatology outpatients has increased because of the improved prognosis and patients' desire for specialists. The outpatient clinic opens at 7:30 in the morning, still, patients have to wait a long time and have little time to see doctors. We therefore started referring patients to general practitioners several years ago, but the referral system at the University of Lübeck is more advanced. Rheumatologists at the University of Lübeck send information about special drugs such as MTX or leflunomide to general practitioners. In particular, they point out side effects to which the general practitioner should pay attention.

Nephrology in Germany

Because I am both an internal rheumatologist and a nephrologist, I observed the hemodialysis units and renal transplantation units at the University of Hamburg and the University of Lübeck. This combination of disciplines is common in Japan, but it is rare in the USA. In Germany, rheumatology and nephrology are combined at some universities. Again I was surprised at the well established system in Germany. A nephrologist cannot open a hemodialysis clinic alone. At least two doctors are required to open a private hemodialysis clinic, which means that they do not have to spend all of their time at the institution.

About 80 to 90 renal transplantations per year are done at both the University of Hamburg and the University of Lübeck. The number of cadaveric donors in Germany is decreasing. There is a treaty among six European countries; Germany used to import many cadaveric kidneys, and now they are adjusting the number. Ethical differences between countries are interesting. In Germany, if the family gives permission, physicians can make a deceased person a donor without a donor card. In Spain, unless the family says no, a deceased person can be designated a donor. . In Scandinavian countries, cadaveric transplantation is almost impossible, and most transplanted kidneys are from living related donors (LRDs). In Germany, 15 to 20% are from LRDs. In contrast, about 20% of kidney donors in Japan are cadaveric. In 2001, 702 renal

transplantations were performed in Japan¹⁰⁾. There were 551 LRD kidneys and 151 cadaveric kidneys (from 135 non-heart-beating and 16 heart-beating donors). ABO-incompatible renal transplantation is prohibited in Germany but performed widely in Japan.

Education of medical students and Rheumatologists in Japan and in Germany

The education of medical students and postgraduate education of rheumatologists in Japan have been summarized by Matsuno et al.¹⁾, but the situation changed in 2005. To be a board-certified rheumatologist, a doctor must belong to the Japan College of Rheumatology (JCR) for more than five years. He or she must work for more than five years at a certified educational institute. The doctor must have taken more than 30 educational units provided by the JCR and must be a board-certified member of the Japanese Society of Internal Medicine, the Japanese Orthopedic Association, or one of 16 other scientific societies.

Medical students in Germany also study for six years. They have lectures until the fifth year, and they study in a hospital for the last year. (surgery, internal medicine, and one discipline they choose). They study basic science for two years and must pass a test called the "Physicum". They must then pass three state exams and the final state exams. After their graduation, they work as a resident. All medical schools in Germany are public, and tuition is nearly free. Japanese medical schools have started a new medical education system called the Objective Structured Clinical Examination (OSCE)^{11,12)}. Such a system has not been introduced in Germany. To become a rheumatologist in Germany, postgraduates are trained in internal or orthopedic medicine for at least six years, with an examination at the end. They then have to learn rheumatology for two more years at a special hospital for rheumatology.

EGYPT

In Egypt, I observed the clinical situation in the Division of Rheumatology and Rehabilitation at the University of El-Minia, the Military Center of Rheumatology and Rehabilitation at Cairo, and a private clinic, and I presented several lectures to rheumatologists. I also lectured at the University of Cairo. I attended a lecture for medical students at the University of El-Minia. In addition, I presented a paper on steroid-induced osteoporosis at second Pan-Arab Osteoporosis Congress at Sharm El Sheikh.

Why Egypt?

Readers may wonder why I close to spend time in Egypt. I started to communicate with the University of El-Minia after an e-mail was sent from Dr. El-Mansoury in April 2001 for collaboration with our university regarding reactive amyloidosis in RA patients. Reactive amyloidosis is rare in Caucasian RA patients²⁾ and thought also to be rare in Arab patients. However, El-Mansoury et al. reported quite a number of occurrences of amyloidosis among Egyptian patients¹³⁾. This is of interest to us because reactive amyloidosis is a serious complication in RA patients in Japan. The complication rate is not as high in Egypt as it is Japan¹³⁻¹⁶⁾, and it is difficult to determine the reason for the difference. Genetic backgrounds and treatment options likely play important roles. In Egypt, many more patients face financial difficulty in paying for treatment options, but the use of MTX seems to be more prevalent in Egypt than in Japan.

The medical system in Egypt

Many kinds of public health insurance are available in Egypt. However, more than 50% of the population (farmers and individuals without formal employment) do not have health insurance. Accordingly, there is a government financial support system. When a person is diagnosed with a particular disease such as systemic lupus erythematosus (SLE), the doctor must submit a report to the government. The government writes a second opinion and submits it to the Ministry of Health and Population. The doctor must submit new reports for each patient every six months.

University hospital doctors are allowed to practice privately after a certain period of graduation from medical school. They work in their own clinics in the afternoon. There are no clinical trials for new drugs. Therefore, new drugs developed in Western countries can be used much earlier in Egypt than in Japan. In this respect, Japan lags behind in the treatment of rheumatic diseases. However, the new drugs seem extremely expensive in light of the income levels in Egypt. For persons who do not have health insurance, medical expenses (mainly for drugs) make up a large percentage of their income. In a small village, I saw some patients with relapsed RA; they could not afford to get to buy MTX although the drug is not expensive. On the other hand, Leflunomide is very expensive, and biologic agents are almost impossible to use because of the high costs. To solve this problem, domestic pharmaceutical companies bought patents for the new drugs and produced them in Egypt (Table 1). In

Table 1. The price of NSAIDs per day in Egypt (Egyptian pounds)

	Improved	Domestic
Celecoxib	8	2.2
Meloxicam	6	2.4
Diclofenac	2.3	0.7

Japan, a generic drug cannot be sold for a considerable period after the launch of a new drug. Laboratory tests in Egypt are also expensive. The erythrocyte sedimentation rate is the only available marker of inflammation since many Egyptians cannot afford measurement of the C-reactive protein. For the same reason, doctors measure the anti-double stranded DNA antibody (about 20 US dollars) to diagnose rather than follow up patients with SLE. It costs about 100 US dollars (330 Egyptian pounds) to measure CH50. The government support system does assist with these costs.

Medical practice is not strictly regulated in Egypt. For example, pharmacists can sell drugs to persons without prescriptions (even steroids, MTX, or anti-cancer drugs), and physiotherapists can open their own clinics (they even prescribe drugs). Doctors can import or use any drug from foreign countries.

Education of medical students in Egypt

In Egypt, as in Japan, training to become a medical doctor starts at 18 years of age and lasts for six years. Most of the medical schools are public, with the exception of two that are private. Tuition for the public schools is low. There is no national examination; each medical school has its own test. Lectures are given not in Arabic but in English. Clinical meetings are also conducted in English. In fact, for every Arab country except Syria, the medical language is English. Dr. El-Mansoury told me of his experience at an international meeting. He said that the presentations of Japanese doctors were excellent but that most of them could not answer questions in English.

During the lecture at El-Minia University, I admired the attitude of the students. They responded vigorously to the questions presented by the lecturer. Because they cannot order modern examinations such as CT or MRI easily in Egypt, medical students and doctors build their skills by taking detailed histories and performing proper physical examinations. The strengths of the Egyptian system expose some of the weaknesses of ours. Many Japanese students do not attend lectures faithfully nor take good patient histories; Japanese doctors rush into ordering blood tests, or CT, or MRI. Most Japanese students and doctors cannot

communicate in English very well. What is worse, we tend not to use English medical terms these days because of the increased number of lawsuits. There are times when family members demand patient records, and these cannot be read if they are written in English.

Rheumatologists and rheumatic diseases in Egypt

For the most part, a rheumatologist in Egypt is called "a rheumatologist and rehabilitation doctor". This doctor does not perform surgery (as orthopedic surgeons do) but does treat many orthopedic patients, such as those with back pain or osteoarthritis of the knee. After graduation from medical school, doctors must rotate between various medical and/or surgical departments for one year. After this rotation, they begin their study of rheumatology. Therefore, they are not real internists, but they do treat lupus nephritis. A few rheumatologists have a background in internal medicine or orthopedic surgery. The medical background of rheumatologists differs from one Arab country to the next. For example, in Libya and Iraq, most rheumatologists are trained in internal medicine, as in the USA.

As in Germany, I was surprised to see differences between rheumatic diseases in Egypt and those in Japan. Ankylosing spondylitis is more prevalent than in Japan, probably because of genetic differences. There are also some diseases caused by infection, such as rheumatic fever, which are seldom seen in Japan.

I was really surprised to see the efficacy of non-surgical treatments of orthopedic diseases; Japanese internal rheumatologists seldom have a chance to practice such a therapy. For example, I saw an old man in pain, crying and being carried into the clinic by several young men. After all, he walked out of the clinic alone without pain, treated only with local anesthetics, steroids, and traction therapy.

Military center of rheumatology and rehabilitation in Cairo

In Cairo, I visited the military medical center for rheumatic diseases. Because this medical center receives a subsidy from the government, its equipment is new and many disciplines are represented such as ear, nose, and throat medicine and dentistry. Just like the rheumatic center in Bad Bramstedt, Germany, the center includes a pediatric department, with schooling being provided for pediatric inpatients. There is a big factory at the center for prostheses, so doctors can order any prosthesis that is needed.

Non-steroidal anti-inflammatory drug (NSAID)-induced ulcers in Egypt

To see the situation regarding NSAID-induced ulcers, I visited the endoscopy room at E-Minia University. However, there were very few patients with NSAID-induced ulcers. This maybe because Cox-2 inhibitors have been introduced (Table 1). Also, because NSAID-induced ulcers tend to be asymptomatic, patients may not seek gastrointestinal fiberoscopy. I was very surprised to see many patients with liver cirrhosis due to hepatitis C in the endoscopy room. They seek sclerosing therapy for esophageal varices. Between 1918 and 1982, millions of patients with bilharzias (infection by *Schistosoma mansoni*) in Egypt were treated with potassium-antimony tartrate. During this campaign, syringes and needles were re-used without being properly sterilized. This is the reason for the widespread hepatitis C infection in Egypt^{17,18}.

The Pan-Arab Osteoporosis Congress

At the Pan-Arab Osteoporosis Congress, most attendees could communicate in Arabic, but the meeting was conducted in English. I was surprised that many speakers quoted many Japanese papers. However, most of the papers quoted were basic science papers; there were few clinical papers. Some very interesting research was presented by a Lebanese rheumatologist. The curve showing the decline in bone mineral density of the spine measured by dual X-ray absorptiometry is very similar between the Lebanese and Japanese, and this decline is far less than that of Caucasians in Europe or the USA. This indicates that if Arab patients are treated for osteoporosis according to the standard curve of Westerners, over-treatment might result. This happened in the treatment of hyperlipidemia in Japan. The ideal serum cholesterol level to prevent ischemic heart disease in the Japanese is higher than that advocated on the basis of the large, randomized controlled studies in Western countries^{19,20}. This illustrates the matter of genetic differences and the need for population-based research.

Can Japanese rheumatology be more international?

For Japanese rheumatologists, it is very difficult to publish clinical research or case reports in international journals because of differences in clinical practice². The approved drug dosages are far less than the international standards, and newly developed drugs are used much later in Japan than in other countries. Having our own journal in English to let the world

know our clinical situation is desirable. The official journal of the Japanese Society of Internal Medicine, printed in Japanese, no longer publishes clinical research or case reports. Instead, Internal Medicine, the official journal of the Japanese Society of Internal Medicine, printed in English, accepts them. The Japan College of Rheumatology has changed its policy as well. Only their English journal, modern rheumatology, accepts clinical research and case reports. There are currently many doctors from Arab countries and elsewhere studying at Niigata University. Most of them come expecting a high level of medical expertise but are surprised to learn that the medical practice deviates from the international standard. We should understand the international situation in rheumatology and let the world know the strengths of Japanese rheumatology, especially the treatment options developed in Japan.

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