

難病患者の未来のために

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【難病に関心を持ったきっかけ】

私は将来、難病に関する研究がしたい。私の祖父は7年前、チャグ・スト劳斯症候群で亡くなった。その時、私は祖父の主治医が泣いている姿を見たが、14歳だった私は、自分の担当していた患者が亡くなって悲しいのだろうと単純な考えしかできなかった。祖父の死から数日後、なぜ祖父の病気は治らなかったのか疑問を持ち、チャグ・スト劳斯症候群について調べた。その時初めて、この病気が難病であること、原因がわかっていないこと、完治のための治療法が見つかっていないことを知った。もしも原因がわかっており、治療法が確立していたならば、祖父は苦しい思いをせずに今も元気に生きていたのではないかと思った。これが私の難病研究に携わりたいと思ったきっかけだ。

世界には病気のために苦しい思いをし、未来に希望を持ってない人も少なからずいる。私の友人もその一人だ。彼は潰瘍性大腸炎を患っており、「病院に行っても、薬を飲んでも病気は治らない。いつ症状が悪化するかわからない。」と言う。彼の言葉を聞く度に、私はこれから医療に携わっていく人間なのに、彼のように病気で苦しむ人を目の前にして何もできないのかと思うと胸が苦しくなる。それは、病で苦しむ患者に何もできない自分の無力さを痛感させられたからであって、きっと祖父の主治医が泣いていたときと同じ感情なのだろう。

難病は根本的な原因がわからないため、完治に向けた治療法が確立できない。しかし言い換えれば、原因がわかることで、完治に向けた治療が確立され、薬も開発されるようになるということだ。例えば、潰瘍性大腸炎は先進国で患者が多く見られる難病で、現在、患者数の少ない国でも、発展とともに患者数が増加することが考えられる。少し大げさかもしれないが、今後、世界で何千万人という患者が潰瘍性大腸炎を患うことになり、治療法が無いままにこの病気に苦しめられる人が世界中で増え続けるだろう。そうならないためにも難病の研究を行うことはとても重要である。

【臨床検査技師と難病】

難病に関する研究では、遺伝子や免疫など様々なことを幅広く学んでいる臨床検査技師だからこそできる物の見方や考え方、発見があると思う。だから私はASCP¹の資格を取り、世界に通用する臨床検査技師

になることで、日本国内だけでなく、全世界で難病に苦しむ人々の手助けをしたい。

臨床検査技師が難病研究に携われることのひとつとして私が考えていることは、チャグ・スト劳斯症候群のような自己免疫疾患の発症初期の段階で炎症を発見し、どのような抗体が何に対して作用しているのか判断できる検査を作り出すことだ。多くの自己免疫疾患は、患者自身が気づかないまま病気が発症し、後に自覚症状が出てくるものが多い。初期の段階で炎症を確認できれば、その炎症が大きくなる前に治療を開始することができる。それは患者の負担を軽くすることにもつながるだろう。

【国際的な視点を持つ利点】

この夢を叶えるために、私は、世界の難病に関する様々な情報を得て、発展途上国から先進国まで各国の研究者と意見を交わし、今までにない画期的な検査方法を開発したい。難病は日本国内だけの問題ではなく、世界共通の問題である。だからこそ、世界中の研究者と繋がりを持つことが重要になると私は思う。それを実現させるために私が欠かせないと思うことはグローバルな視点を持つことだ。そのためには、学生時代から国際交流の場に積極的に参加し、海外の人々と関わる機会を持つことや、様々な国の文化や考え方などを意欲的に学ぶことが大切だ。私は2016年に神戸で開催される国際医学検査学会の学生フォーラムにも参加し、学生の頃から国際的な感覚を身に付け、グローバルな視点を持った、世界で活躍する臨床検査技師になりたい。

難病と闘う祖父の姿を見ていたからこそわかる患者自身やその家族の辛さ。その経験を今後は医療関係者の立場として生かし、現在、世界で「難病」と呼ばれている病気が、いつの日か「難病」と呼ばれなくなる日がくるよう、一人でも多くの人の助けになりたいと思っている。

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Medical Technologists and Future Hope for Patients of Incurable Diseases

Mutsumi Kita (Kobe Tokiwa University)

【How I got interested in studying incurable diseases】

I would like to engage in research on incurable diseases in the future. My grandfather passed away seven years ago due to Chung-Strauss syndrome. When he passed away, I saw his doctor cry. Several days after his death, I looked up ChungStrauss syndrome, because I wanted to know why he did not recover. Then I discovered it is one of many incurable diseases. If the cause and its effective treatments had been known, my grandfather would not have suffered so much and he would still be with us. That is how I got interested in studying incurable diseases.

A lot of people are suffering from various intractable diseases, and so they cannot have any hope for their future. One of my friends is suffering from ulcerative colitis. He says, "I cannot get rid of it even though I go to the hospital." My heart aches when I think of people suffering from serious diseases like him. I feel rather powerless toward them. And now I understand why my grandfather's doctor cried. He must have had the same feeling of powerlessness.

【Medical technologists and incurable diseases】

Medical technologists can make great contributions in the field of incurable diseases. Medical technologists know extensively about genetics and immunology. Therefore, I'm going to obtain an ASCPi certificate in order to work internationally, and I'm going to help those who are suffering from incurable diseases throughout the world.

I would like to create a new test method that will detect inflammation at an early stage of an autoimmune disease such as Chung-Strauss syndrome, and also identify what a certain antibody is responding to. Many autoimmune diseases may start to develop unbeknownst to patients themselves, and only later do subjective symptoms arise. If

inflammation can be detected at an early stage, patients can start treatment before it becomes severe, which may provide relief for them.

【Why I should have a global perspective】

In order to realize this dream, I need to obtain various information concerning incurable diseases and discuss with fellow researchers throughout the world. With this information, I would like to develop a totally new testing method. Since incurable diseases are a worldwide problem, I think that it is important to develop powerful connections internationally. Gaining a global perspective is essential for that. Therefore, while in university, I will participate in international exchange activities, grasp any opportunities to interact with people from all over the world, and aspire to learn about many cultures and points of view in the world. I'd also like to participate in the Student Forum at the Congress of International Federation of Biomedical Laboratory Scientists to be held in 2016 in Kobe. I hope all these efforts will help me gain a global perspective and will make me become a medical technologist who conducts activities across national boundaries.

My grandfather's battle with the disease taught many things. When I start working as a medical technologist, these experiences will surely guide me. I hope there will be no incurable diseases in the future, and I hope I will help many patients.

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世界で活躍できる臨床検査技師になるために

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【はじめに】

近年、医療ツーリズムや国境なき医師団をはじめとする医療の国際化が進んでおり、こういった国際化への流れは臨床検査技師においても例外ではない。国際化と聞くと、一般的に英会話ができることや海外で働くということが先に連想される。英語は世界的に共通の言語とされ、英語を話せるということは言うまでもなく重要な要素であるが、それだけでは国際化とは言えない。ゆえに、今回は英会話の習得以外に目を向け、1つ目は自分自身が臨床検査技師として国際的にやりたいこと、2つ目は世界で活躍できる臨床検査技師になるためにやりたいことを述べていく。

【検査室の国際化への活動】

1つ目は、検査室自体の国際化へ向けての活動を行っていききたい。現在、日本の病院においては、海外からの臨床検査技師を受け入れておらず、日本の病院で働く海外の臨床検査技師はほとんどいないように思われる。一方で、例えばアメリカでは、ASCPi (American Society for Clinical Pathology International) の資格を取得することによって海外の臨床検査技師を病院に受け入れることが可能となっている。ここで、日本の検査室でもアメリカの例のように、海外からの臨床検査技師と一緒に仕事を行っていきような環境を作りだすことができると、国際化にもつながり、また臨床検査技師個人個人が国際的な視点や価値観を持ちながら検査業務を行うことができるようになると思う。こういった理由から、将来的には自分自身が臨床検査技師として、海外の臨床検査技師と一緒に働けるような環境、つまり資格や制度の設置を働きかけていきたいと考えている。

【積極的な研究活動】

2つ目は、ルーチン業務とは別に研究活動も積極的に行っていききたい。現在、大学院に在籍しているが、これまでに様々な専門的な技術や知識を身につけられている。例えば、質量分析装置を用いた脂質の定性分析の技術は今までの検査室では身につけられない技術である。将来、臨床検査技師として医療に従事してい

く際には、これらの経験を生かすことで更なる探究心や興味を持ち、そして研究活動へとつながっていく。しかしながら、ただ研究活動を行うだけではなく、研究の成果を論文化し、また海外への発表をしていくということも大事である。そうすることで、世界に向けて情報を発信することができ、また研究活動を通して、逆に世界から情報を仕入れる機会も多くなるのである。そういったことから、現在の臨床検査分野での世界の動向、状況をくみ取ることが可能になるはずである。そして、臨床検査技師個人としても視野が国際的に広がり、単なる医療従事者ではなく“高度”医療従事者として成長していくことができる。ここで私が考える“高度”というのは、技師としての高い専門性や知識力、技術力はもちろんのこと、それとは別に国際的な視野も兼ね備えているという意味も込めている。

【まとめ】

自分自身が臨床検査技師として国際的に行っていききたいことは、1つ目は、海外の臨床検査技師が日本の検査室と一緒に働けるような環境、つまり資格や制度の設置を働きかけていくということ、そして2つ目は研究活動を積極的に行い、“高度”医療従事者として成長したいということである。

これらの活動を通して、日本の臨床検査がより発展していくことを望む。そして、世界の臨床検査の発展に貢献できればと思う。

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In order to be a biomedical laboratory scientist who can succeed overseas

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【Introduction】

Today, globalization of medicine as shown in medical tourism and Medecins Sans Frontieres is ongoing. Biomedical laboratory scientists are also involved in globalization. The word of globalization make people remind the skill of English conversation and working abroad. English is a universal language of the world. Speaking English is an important factor for globalization. However, it is not enough for globalization. Here, I will focus on two topics. First, what kind of international works I hope to do. Second, what to do now in order to be a good international biomedical laboratory scientist.

【Action toward globalization of clinical laboratories】

First, I would like to take action for globalization within clinical laboratory. At the present time, only little foreigners are working in a Japanese clinical laboratory. On the other hand, in US, foreign people can work in clinical laboratories after being qualified by ASCPi. If Japan has a similar system with ASCPi, globalization starts in Japanese clinical laboratories. Individual biomedical laboratory scientists can be more international in terms of view point and values. In the future, I will make an effort such as working for the introduction of international qualification system to Japan, in order to realize international clinical laboratories in Japan.

【Active research】

Second, I would like to be involved in research activities, not only in routine laboratory practice. I am studying at a postgraduate school. There, I have learned various technical skills and knowledge. For example, the skills and knowledge on lipid analysis using mass spectrometry is available at my postgraduate school, but not in clinical laboratories at least in Japan. Such experiences will stimulate

my spirit of inquiry and curiosity, and motivate us to research. Of course, the research results should be published in international journals and presented at international meetings. Thus, we can provide information to the world, and can be communicated from the world. Then, the most recent and world-wide information in the area of biomedical laboratory science will be more accessible. Eventually, we will have an internationally broaden view as a biomedical laboratory scientist, and grow to be a highly-advanced medical professionals. In my thought, "highly-advanced biomedical laboratory scientists" must be those who have expert knowledge and skills of biomedical laboratory science. Further, they must have internationally broaden view points in the area of biomedical laboratory science.

【Conclusion】

In conclusion, I try to become a highly-advanced medical professional with international view point, and to realize international clinical laboratories in Japan.

I hope that their activities will contribute to the development of the field of the clinical examination in Japan and all over the world.

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医療における国際的な課題と我々が為すべきこと

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【医療における国際的な課題】

世界に目を向けると、医療水準が低く、経済的、あるいは環境的な要因により十分な設備や機器を整えることが困難で、結果として患者が適切な医療を受けることができない地域が多く存在する。すなわち、現代の医療技術があれば助かる命であっても、それらの地域においては助けることが出来ないという問題がある。この背景には、日本のような先進国では当たり前と思われるような知識や技術が発展途上国には深く根付いていないという事実が存在する。発展途上国において、主に経済的な理由により設備や技術が伴わず、患者に実施すべき最善の検査及び治療方法が選択できないというのは大きな問題であると考ええる。また、現在日本を含めた先進国では医療に関する研究が盛んに行われ、多くの成果を挙げているが、それらが国際的、特に発展途上にある地域の医療現場に反映されているかは疑問である。

【課題に対する提案】

医療技術の目覚ましい進歩が取りざたされる昨今ではあるが、私達は今ある医療技術を世界各国の医療現場に広めることも同様に大切であると考ええる。すなわち、医療の知識を学んだ後、研究に従事する者、病院業務に従事する者などがいる一方で、そこで得られた知識、及び医療技術を広く国際社会に提供する人材が必要なのではないかと考える。当然、経済的な理由も含む様々な制約により、国家や地域ごとの実施可能な医療には限界が存在する。しかし、私達が十分な教育を受けることが出来ない地域に赴き、培った知識と技術を現地の人々に提供することで、国際的な医療水準の向上に大きく貢献できるのではないかと考える。

一つの例として、「国境なき医師団」が挙げられる。国境なき医師団に所属する臨床検査技師は、自国の病院で培った知識と技術を生かし、発展途上国に赴いて臨床検査に関する知識の提供や技術指導を行っている。

そこで我々は国境なき医師団などの活動とは別に、「国境なき臨床検査技師団」ともいべき組織が必要ではないかと考える。本団体は医療水準の高い先進国などからメンバーを募り、医療水準の低い発展途上国に対して、メンバーを送り込む。先進国には組織の本部を、発展途上国には支局を構え、専従の支局長を配置することで統率を図る。支局長は現地の臨床検査技師と共にその国の臨床検査の現状を把握し、本部に報

告する。本部では各地域に必要と考えられる人材を募集し、現地へ一定期間派遣する。また、定期的に現地の臨床検査技師の中から先進国への留学者を募る。留学者は最新の臨床検査に触れることで、自国の臨床検査技術の発展に繋がることを期待できる。そのような「交換留学制度」が理想的ではないかと我々は考える。そして、このような活動の継続が、発展途上国における臨床検査の水準の向上に結び付くと考える。

しかし、この制度には留学中の収入や生活環境、言葉や文化の違いなど多くの問題が考えられる。したがって、実現には企業や団体などの協力は必須である。保障の面では交換留学中のある程度の収入や出来る限り安全な生活を送ることが出来る環境が整備される必要がある。また、文化や言語に関する問題は、各地の本部や支局において学ぶことが出来るのが望ましい。

この夢を叶えるために、私たちは各国に派遣される臨床検査技師の先駆けになっていきたいと考える。そのためには、まず自国の臨床検査技師に就き、十分な知識と技術を培う必要がある。その後、発展途上国に赴き現地の状況及び問題点を把握し、それら地域への派遣及びそこからの留学ができるような制度を作りたい。私たちはそうすることで、国際社会に貢献していきたいと考えている。実現するには多くの困難が予想されるが、まずは私たちに可能なことから少しずつ実践していきたい。

【結語】

国家間の医療における格差を是正するためには、先進国において学んだ知識と技術を広く発展途上国に還元する人材が必要である。私たちは将来、途上国におけるそのような指導的立場を担う可能性も踏まえ、まずは日々の学びに取り組んでいきたいと考える。

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What should we do for international laboratory development ?

Motomu Yomura (Tenri Health Care University)

【International medical problems】

There are many regions around the world where patients cannot receive appropriate medical care because their economical and environmental factors prevent supply of sufficient laboratory techniques. Many patients might be saved if modern laboratory technology is supplied. Students majoring in laboratory science in developed countries can commonly learn the latest laboratory knowledge and techniques, but those in developing ones cannot do them. In developing countries, facilities and technology are insufficient by their economic reasons, so that a big problem arises; patients cannot choose and receive the best diagnostic and therapeutic methods. Now, in developed countries, much research in regard to laboratory science is conducted enthusiastically and gives great results, but we doubt whether the benefit is spread out in local areas.

【Suggestion against the problems】

In these days, laboratory technology certainly progressed, but we think it is also important to spread the technology in medical scenes of all over the world. In our countries, after having learned laboratory knowledge in universities, some persons will engage in hospital duties, and others will become researchers, but we suggest they have to supply their medical and laboratory skills widely in the global community. Developing countries certainly have much limitation including the lack of economic power for the sufficient medical care, but we can go there and supply techniques that we got. As a result, we will be able to greatly contribute to the advancement of an international laboratory standard. As an example of the contribution, we can cite the "Reporters Without Borders". The medical technologists in this group go to developing countries and instruct their skill to medical staffs in there.

Therefore, we hope that the organization called "Medical Technologists Group Without Borders" is established. This group would gather medical technologists from the developed countries having great laboratory techniques and send them to their home ones. The headquarters of this group would be established in developed countries and the branch offices would be installed in developing ones. The branch chiefs have to grasp the level and spreading of laboratory technology in their countries and report problems to the headquarters. The heads have to pick up human resources necessary for each

region and send them to the field for a fixed period. In addition, the branch chiefs regularly gather technologists in there who want to study abroad. They can learn it the latest laboratory technology in developed countries, and finally, this activity would lead to the development of clinical laboratory in their mother countries. We consider such "the exchange study abroad system" is ideal and the continuation of such activity would be connected with the advancement of the laboratory standard in developing countries.

However, this system has many problems for the exchange students while they live in foreign countries; for example the difference in a living environment, culture and income. Therefore, the cooperation of some companies and groups is required to realize this plan. In addition, it is necessary for exchange students to get some income and environment where they can live safely and learn the culture and language of each country.

To realize this project, we want to be the frontiers of the medical technologists as mentioned above. At first, it is necessary for us to cultivate adequate knowledge and techniques in Japan. After that, we want to go to developing countries and experience the medical scene and problems in there. In addition, we want to establish the system that can send human resources to those regions and study abroad from there. Much difficulty is predicted to realize this plan, but we want to make efforts little by little.

【Conclusion】

We think that the human resources who instruct the latest laboratory knowledge and techniques to medical staffs in developing countries are necessary to correct the difference of global laboratory standard. We want to be such the leading persons in the future and engage in daily learning.

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Active and Creative Experience Activities of Science Club in College

Gijun Nam (Department of Biomedical Laboratory Science, Health College, Kyungwoon University)

【Background】

The Clinical Pathology Major Students' Club of Kyungwoon University conducted a study in April at 2011 on the society's awareness of the clinical pathologists and on ways to improve it. A survey done based on the result of this study shows that the society's awareness of clinical pathologists still remains low. The purpose of my study was to better prepare myself as a future clinical pathologist, to contribute to improving the society's awareness of the clinical pathology, and to enjoy seeing the competence of my working knowledge grow through creative and active practice activities of the club of my major.

【Methods】

We have focused our practice activities on the cities of Gumi and Daegu and on the regions of Pohang and Changwon. The activities were performed on various age groups tailored according to the age characteristics. Creative practice activities included a survey which served to promote the study of the clinical pathology, and linked middle school, high school, and university; Active practice activities were performed as social and medical services. The surveys were carried out in Gumi station, Daegu station, Daegu-Dongsungro station, and Changwon station where the various age groups were found. The middle school, high school and university link activities were done on the high school students who visited the campus my university at the time. The social and clinical services were provided for seniors in the cities of Gumi and Daegu, and in Pohang region.

【Results】

The survey has helped to promote the study of clinical pathology among the participants and has provided an opportunity for me to gain a deeper appreciation and stronger conviction on my major. The link activities of the middle school, high school, and the university, which were done according to the specialized areas of the major, also served to promote the domain of the clinical pathology among the participants while helping me to systematize what I have studied as a major so far. The community services performed on the seniors improved their awareness of the clinical pathology. The clinical services performed on them increased

their understanding of the domain and role of a clinical pathologist. The work helped me to gain more competency in my clinical skills.

【Discussion】

This study was done with the goals of promoting awareness of clinical pathology and its specialized areas of study, as well as better understanding of clinical practice and pathologist's role through creative and active practice activities of the Clinical Pathology Major Students' Club. It was rewarding to see these goals accomplished and the participants, especially the seniors, appreciating even a small amount of help they received. Furthermore, this study gave me a strong affirmation for the choice of my major and aided me to better systematize my knowledge of the major. Applying my knowledge and practicing the skill on real people in various practice activities added competence level to my clinical skills. The positive and rewarding experiences of this project gave me reasons to expect a continuous development and improvement as a student of clinical pathology through creative and active practice activities of my major students' club. It is my conviction that if similar clubs of other universities can develop their unique and effective practice activity programs and share their best models with others in order to work together to further develop and improve the practice activity programs, it will contribute to society's increasing awareness and understanding of clinical pathologist, and have a profound impact on the students themselves for their learning and love of clinical pathology that the years they studied at their universities will remain in their hearts as a fond memory.

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Challenge of youth

○ Lee Kyoung Mo (Masan University)

The students of today's generation are faced with speedily changing diversities of cultures and the stress of employment that they don't have a society for themselves nor the empathy that could be created amongst them. As a student of Pathology, I would like to experiment and explore the current college life (looking back in the past as well) and suggest ways to living a developing and satisfying college life. In the past, philosophy and art were the enjoyment for the young and it was their way out for them from the struggles. As much as it was the time of struggle, the people were participant in helping and sacrificing for the nation. By being able to communicate between the elderly and the youth, the problems were able to come to rest. With this, they were able to create a sense of belonging to one another. In contrast, the communication of today has gone online (Social Networking Service) that the social consciousness has declined and only the need to get employed is the matter they are aware of. This has brought out the selfish nature and has made it common to have one. And so, when we set on the path to becoming a professional, we learn to not to cross the line and realize what we can take advantage of as college students. We can think bright and in benefitting ways of making the best out of being in Pathology. We have come down to couple of key factors: having self-respect, passion for sticking to the basics as a student, having the morality to becoming a perfect citizen, and by finding the passion and youth that would lead to the lost romance of our lives. In trying to change the prejudices of Medical Laboratory Technologist, we've done a on-the-job practice while interview in hopes of showing the works the MLT does. We've also done events where we've performed our works on site for the middle school and high school students so that they could learn about the variety of work the MLT does. Secondly, we used the Case Method Learning to gather people to work in groups to enhance the possibilities of solving problems. We've also made the people of same specialty work together going in depth in their acquired fields achieving in an opening of a conference. Thirdly, we have set rules and regulations of speaking in kind tongues and stopping all wrongful doings. Lastly, we have made bulletin boards where ideas could be shared and where admiration for one another could be noted. We also have made a Dosirak

Day where we gather together to share laughs. Another group we've made is a conference or a small gathering where we share our imperfections and find solutions or ways to develop them, thus creating a nature of togetherness amongst the seniors and the younger ones. In conclusion, the students were slowly coming together as a group, and they were able to share their ideas and thoughts more actively. And in the rough times as college students, they were able to rely on one another and become great footholds for one another. Through this subject, we were able to realize the hidden gems of college life even in the chase of National Exam and employment. We feel as young as ever, and I guess that the youth igniting in us.

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