米国での研修と，私がそれより得た教訓及び提案

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(1) Introduction – U.S. Naval Hospital Okinawa から New York に至るまで

今回，私は 2015 年 12 月 7 日から 11 日の 5 日間，New York の病院や clinic で研修する機会を頂いたのだが，ここでは，その契機となったイベントの話から始めたい。

2015 年 7 月中旬，私は沖縄県中頭郡北谷町の米軍基地内にある U.S. Naval Hospital Okinawa（以下 USNH）の externship program に参加した。私の他に 3 名の参加者がおり，私は救急科，他のメンバーは家庭医療科，整形外科，皮膚科＋神経内科とそれぞれ違う科を回っていた。救急科は，指導医はもちろんのこと，看護師など他のスタッフの雰囲気は概して friendly であり，stranger の私にも気さくに声を掛けて頂いた。救急外来では，私が患者（米兵とその家族）の初診を担当し，経過・所見等を指導医に報告してから指導医による本診となり，その後に指導医と治療方針などを相談する形式を取った。指導医の先生方には，間違いや所見の取り忘れを丁寧に指摘して頂いたり，簡単な講義を交えて患者の management を一緒に考えたりして頂き，大いに勉強となった。他にも，毎朝 morning conference があり，そこで USNH に勤務する日本人 intern や私たち extern が症例を提示し，指導医を交えて discussion を行ったが，皆積極的に発言していたので，私も気兼ねなく意見を言うことができ，文字通り活発な議論を楽しむことができた。

また，診療の態勢も日本と大きく異なることに私は驚いた。救急外来が忙しい時間帯には physician assistant（以下 PA）と呼ばれるコメディカルの職員が出勤し，医師と分担して患者の診察を行い，医師に患者の状態等を相談した上で処方まで行っていた。他に，corpsman と呼ばれる職員も複数名おり，比較的広範囲に及ぶ排膿など時間がかかる処置を医師の代わりに行っていた。また，医師・PA も勤務する時間帯が日本とは異なり，7 時～15 時・15 時～23 時，23 時～翌朝 7 時の各 8 時間のシフトで交代する形式を取っていた。米国では，このようにして様々な職種に業務を分散することで，各医療スタッフにかかる負担を軽減し，全員が常に満足のゆくパフォーマンスで働けるように努めている事が分かった。今日，日本では医療現場の疲弊が時折話題に上るが，医学部定員増加に加え，米国のような多職種との役割分担強化によって，現状を改善させられる可能性があると感じた。

USNH での externship は，臨床的知識の勉強になっただけでなく，日本と異なる医療態勢及び医学教育への態度を経験でき，大いに motivation を刺激された。この externship も 5 日間と今回の New York 研修と同じ長さであったが，病院自体が小規模であったこと・軍の施設という特性上，患者の年齢層に大幅な偏り（小児や 18～40 歳程度の成人のみ）があったこと・脳神経外科など外科系も見たかったことから，米国本土の病院における研修を可能とする今回のプログラムへの参加を希望した。

(2) New York での研修

今回私は，米国日本人医師会（Japanese Medical Society of America；以下 JMSA）会長でもある安西弦先生が院長をされている clinic, Midtown Ob/Gyn と，Maimonides Medical Center 脳神経外科の Erich Anderer 先生のもとで，それぞれ 12 月 7・10・11 日の計 3 日，12 月 8・9 日の 2 日間お世話になった。

Midtown Ob/Gyn では，初日の朝から安西先生と Midtown Ob/Gyn の他の先生方が術者を務める帝王切開を New York University（以下 NYU）Langone Medical Center にて見学させて頂いた。少なくとも私の病院では，開業医の先生が手術を執刀するというのは見られないが，Midtown Ob/Gyn の先生方は NYU と連携し，自分たちの担当患者の分娩や手術を同 Medical Center で担当できるようにしている。

それ以降の Midtown Ob/Gyn の全日程は外来見学であったが，妊娠が判明した段階から産褥期に至るまで，妊娠・周産期の様々な段階にある患者さんに加え，不妊や生理痛，子宮筋腫の手術適応に関する相談など婦人科的な主訴の患者さんの診察も見学することができた。自分の病院で婦人科研修を 2015 年 4 月の 1 ヶ月間しか取っていなかった私には，またとない勉強の機会となった。

また，様々な背景をもつ患者さんが来院されていたこともあり，米国と日本での治療方針や薬品・手術器具の適応，保険制度の違いなどを知り，驚くことも少なくなかった。例えば，米国では経腟分娩へ硬膜外麻酔を併用するのが一般的であり，保険でもカバーされていると聞いた。また，米国では帝王切開や経腟分娩後に，母子ともに状態が特に問題なければ 2 日程度で退院するのが一般的であり，それを支持するデータも出ているとの事であった。更に，保険会社と契約をされておらず，手術を受けるか否か迷っておられる外国人の患者さんが，「以前他院で手術をしてもらった際には，ディスカウントしてもらった」・「母国に帰れば，あちらの保険が使える」などと診察の際にお話されているのを見て，医療保険制度の違いを実感した。

Maimonides Medical Center 脳神経外科では手術見学が主であり，日程は 2 日間のみであったものの，私の病院の脳神経外科との違いを次々と目にして，まさに驚きの連続であった。今回私達が見学した手術は計 4 件で，いずれも術者は Anderer 先生と，同じ PA の方であった。これらのうち，初日に私達が見た手術は，側頭葉深部に位置し海綿静脈洞へ一部浸潤していると思われる脳腫瘍がある 70 代中国系米国人男性の患者さんと，慢性経過の頭痛及び複視を契機に巨大な前頭-側頭葉脳腫瘍（神経膠腫疑い）を指摘された 20 代中国系米国人女性の患者さんの 2 件であり，いずれも私の病院では珍しくない高難度の症例であった。これらの症例を，Anderer 先生と助手の PA の方は，顕微鏡を一切使わずルーペのみで行い，手術時間は 2~3 時間程度と思いもよらない短時間で終わらせていたのだ。しかも，術後の患者さんにはいずれも術前と比較して粗大な麻痺は見られず，経過は概ね良好であった。更に驚くべきことに，Anderer 先生の手術で毎回助手をされていた PA の方は，Anderer 先生から最初の皮膚切開及び最後の閉創を一任され，それを正確かつ迅速に行っ

ていた。この他，翌日には腰椎ヘルニアに対する椎弓切除術を 2 件見学した。Anderer 先生と PA の方は，前日と同じくルーペのみを用いて 2 件とも正午前には終わらせていた。また，この 2 件の手術には整形外科 resident も研修の一環で術者の一人として参加されており，日本より診療科間の壁が低いように感じた。

福島県立医科大学附属病院と全く異なる方法で難易度の高い手術を難なくこなす Maimonides の先生方に呆気に取られるあまり，私は質問をしそびれた。しかしながら，この研修プログラムの最終日にあった JMSA 主催のパーティで Anderer 先生とお会いした際，気になった患者さんの経過及び手術方法について質問することができた。「重要な構造（運動野，言語野，脳神経など）への侵襲を避けることが重要だ」・「そのような部位に浸潤した病変は敢えて残し，術後の化学療法ないし放射線療法で治療する」と Anderer 先生もおっしゃっており，これはどの施設の脳神経外科にも共通する原則であることは私でも想像に難くないが，Anderer 先生の場合は，それを短時間かつ，私達が経験してきたものと別の approach で達成していることは，私にとって非常に忘れがたい，刺激的かつ興味深い経験となった。

今回の New York 研修では，日本と異なる臨床的 approach を USNH 以上に実感し，尚且つその根底にある，私達日本に引けをとらない高度な医療水準を目にすることができた。そして何よりも，これらの経験のお陰で，私達の日々の仕事及び将来のキャリアに対する motivation は更に高まった。一方，この 5 日間だけでは，日本と異なる臨床的 approach を学び，尚且つ米国の医療や医学教育の長点を見極めるには物足りないとも感じた。自分の臨床能力・経験を更に伸ばし，同僚や後輩らにも十分な教訓を残す為にも，米国でより長期間（例えば，1~数か月単位で）研修する機会があれば，また参加したいとも思っている。

最後に，今回の非常に貴重な経験をする機会を私達へ提供する為，大いに尽力して下さった安西先生をはじめ JMSA の皆様, Anderer 先生, Kamal Ramani 先生, NPO 法人キューオーエルの常磐様，そして大谷晃司先生，田畑雅央先生，菅野武先生に深謝申し上げたい。

(3) 今回の経験に基づく提案

私は，この 5 日間と USNH を通じて得た教訓を福島県，或いは日本の医療と医学教育の改善に活用できると考えている。

現在，日本各地で医師不足・医師偏在が叫ばれ，様々な対策が講じられているが，現在のところ出口が見えていないのは福島県内を見渡すだけでも明らかである。今回の New York 研修に先立ち，Kamal Ramani 先生のご講演を仙台にて拝聴し，その際 Ramani 先生が「米国でも，研修医が都会の病院を選びたがる傾向がある。しかし，米国の場合は外国人も USMLE を受験し米国内での residency に参加可能である。そういった外国人医師を採用することで地方の病院が成り立っている」という話をされていた。しかしながら，現在の日本の場合，国民性などを考慮しても，そのような解決策が受け入れられることは困難であろう。従って，医学部卒業後の学生や初期研修終了後の研修医に地元へ定着しても

らい，尚且つ医師が十分数居る人口過密地域から医学生・研修医を引き付けるような方策を真剣に検討しなければならないのだ。

そのような方策として，私は米国方式の医学部教育・臨床研修を福島県において導入することを提案したい。今回 New York を訪れた際，JMSA の先生方が指摘されていたのが，米国と比較すると日本の BSL が形骸化しているとのことである。米国は，日本と比べると学生が臨床現場へ手を出せる状況が多く，その分学生はより真剣に評価され，それらは最終的に単位認定へ関わるのだ。また，米国では指導医が学生・研修医を指導する際に「最初に褒め，次に間違いを指摘するが，最終的には褒めて終わる」というのが基本方針であるが，それを私は USNH と New York の両方で経験し，大変好ましいと感じた。

他方の日本はどうであろうか。私が学生だった時，BSL では手術・手技・外来が見学のみ，特に何の指示も無く放置されるといったことは珍しくなく，同級生の中には「〇〇科は雰囲気が良くないから選択肢として無いな」などと述べる者もいた。更に，研修医である現在と比べると，今日の日本の BSL では臨床の緊張味や実際の流れを十分理解することが極めて難しいと私は考えている。私は，これらの要因によって卒後・初期研修終了後に大学病院或いは県内の病院で研修することを敬遠したり，4 月から医師となった途端大いに戸惑ってしまう研修医が少なからず現れているように思えてならない。私は，これらの欠点を克服する決定的打開策を講じてこそ福島県の医療に光が見えてくると考える。そして，この打開策として，私は米国方式の医学教育・研修制度の導入を提案したい。

更に，今日の日本では，医療費の増加などの社会保障に関する問題が良く話題となっている。私達が大学 6 年時に受講した国家試験の公衆衛生分野対策ネット講座でさえもこれらの問題に触れており，この講座の講師は，日本の医療の特徴と医療費増加の関連性について「医師が少ないのに，急性期ベッドが多く在院日数が多い。つまり，急性期と慢性期の峻別ができず，慢性期に医療資源を漫然と注ぎ込んでいる。これは我が国の医療費が増え続けている要因の一つである」と述べていた。

私は皮肉にも，この差を今回の New York 研修で少しながら実感した。帝王切開・分娩後の退院時期については既述の通りであるが，Maimonides でも，脳腫瘍の患者さんへ IC を行う際に，Anderer 先生が「術後問題なければ 2 日で退院できる」とお話されているのを聞いて大変驚いた。日本では，一昔前に公開された社会派ドキュメンタリー映画の影響もあり，米国の医療保険事情を悪の権化と見なす意見が良く聞かれるが，視点を変えれば，「米国こそ，急性期とそれ以外の区別を慎重かつ明瞭に線引きが出来ている。その結果，患者側に余計な経済的・時間的負担を強いず，保険会社側も余計な支出を引き受けずに済んで一挙両得である」という見方もできるのではなかろうか。急性期寛解後の早期退院は，まだ日本国内において受容される風土が無いのは明白であるものの，我が国の社会保障基盤が危機に瀕し，将来の世代に残せないという重大な可能性をより直視することで，政府及び国民が，公正なプロセスで合意を形成した上で大胆な選択をすることを私は敢えて提案したい。

My Training in the U.S., and Lessons and Proposals Acquired from These Experiences

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(1) Introduction – From U.S. Naval Hospital Okinawa to New York

From December 7th to 11th 2015, I gained opportunity to have training in the hospital and clinic of New York. First of all, I would like to start with mentioning the event which had me apply for such opportunity.

In mid of July 2015, I took part in the externship program of U.S. Naval Hospital Okinawa (USNH). There were another three externs at that time, and each of us went different departments; I was at emergency medicine, and the others were at family medicine, orthopedics and dermatology plus neurology respectively. The staffs of emergency medicine, including instructing doctors, were generally friendly so that they affably talked to me. In emergency room (ER), I was allowed to meet patients (in USNH, patients are mostly U.S. soldiers or their family members) and to conduct physical examination to them. After meeting patients, I reported the history and clinical findings to the instructing doctors. Then, the doctors met the patients to check if I had been correct. Afterwards, we discussed the differential diagnosis and treatment for these patients. Instructing doctors often pointed out my mistakes gently, and discussed management of patients together, with making short lectures for me. These lessons were very helpful in learning clinical knowledge. Also, in every morning, Japanese interns of USNH and externs made presentations about patients they had met before, and we and instructing doctors had discussion about these cases. Every attendee of this conference including me usually presented their opinions without hesitation. We were enjoying namely 'active' discussion.

I was surprised with the different system for clinical management from Japan as well. In ER of USNH, physician assistant (PA; one kind of healthcare providers which Japan does not have) came to work at the time when ER usually got crowded. PAs meet patients and make diagnosis or decide management like a medical doctor (MD), but they usually need to consult MD about advanced managements such as prescriptions. In addition, they had other kind of healthcare providers called corpsman in USNH. They usually did time-consuming procedures such as drainage against relatively large skin abscess. Moreover, time shift was different from Japan. In ER of USNH, staffs rotated the 8 hours of the shift in 24 hours (for example, each shift consists of as follows; 7.00-15.00, 15.00-23.00, 23.00-7.00 of the next morning). In the U.S., by dispersing works to variety kinds of healthcare providers, they are successful in reducing each staff's burden. In other word, this system aims to enable every personnel to work

satisfactorily all the time in their shift. In my opinion, the same system should be introduced to hospitals of Japan, because healthcare providers' fatigue is problematic and that is one of the reasons why medical students and residents often avoid particular specialties.

Through externship at USNH, I learned a quantity of clinical knowledge. Plus, I could see different system of clinical practice and different attitude to medical education from Japan so closely. These experiences energized my motivation. Although USNH had had the same length as our stay at New York, I still had had some reasons to study in the setting of the U.S. again: First, USNH had limited size in facility. Second, there was a great polarization of patients' age at USNH; they were mostly children and adult aged 18 to 40s. Third, I had wanted to take part in surgical specialties, especially neurosurgery. These reasons had brought me all the way to New York.

(2) Training in New York

In New York, my training schedules consisted of as follows; Midtown Ob/Gyn (the clinic at which Dr. Yuzuru Anzai, the chairperson of Japanese Medical Society of America or JMSA, serves as a director) at December 7th, 10th and 11th, and, Division of Neurosurgery, Maimonides Medical Center (the hospital at which Dr. Erich Anderder took care of us) at Dec. 8th and 9th.

In the first day of Midtown Ob/Gyn, I observed one case of caesarean section (C-section) performed by Dr. Anzai and another MDs of Midtown Ob/Gyn at New York University (NYU) Langone Medical Center in the morning. At least in my hospital, we do not see MDs of private clinics performing surgery. In contrast, MDs of Midtown Ob/Gyn collaborate with NYU, and this enables them to manage vaginal labors and to perform surgeries for their patients at NYU Medical Centers.

After the C-section, my schedule at Midtown Ob/Gyn had been observing outpatient. I was able to observe patients in any stage of pregnancy or peripartum period, starting from noticing pregnancy to puerperium. Also, we met patients with gynecological problems such as infertility, menstrual cramps and consultation about surgery against uterine fibroid. Because I had taken rotation of gynecology only for one month at April 2015, these experiences at Midtown Ob/Gyn gave me the second opportunity to study obstetrics and gynecology.

I was also astonished to know difference of treatment strategy, common indication of some medications or instruments and insurance system between Japan and the U.S. For example, introducing epidural anesthesia to vaginal labor is quite common in the U.S. and accepted to all insurance companies. In Japan, they rarely use epidural anesthesia to vaginal labor. Moreover, in the U.S., unlike most cases of Japan,

discharging patients 2 days after C-section or vaginal labor is common unless there is any patients' condition which contradicts it. Dr. Anzai also taught me that there are some study results which support such clinical decision. Also, one day, we met a foreigner patient who could not decide if she would take surgery for uterine fibroid because she had not contracted any insurance. She said, "Previously, I took surgery of my foot with discount on my payment." She also mentioned, "I may take surgery in my country. There, I am still accessible to governmental insurance."

In Maimonides Medical Center, our main schedule was observing operations and we had four surgery cases in total from Dec. 8th to 9th. Although we were at Maimonides only for two days, our visit was filled with plenty of astonishment, because there was a huge difference between Maimonides and my hospital - Department of Neurosurgery, Fukushima Medical University (FMU).

In all surgery cases, main operator was Dr. Anderer and co-operator was the same PA. In the first day, we experienced two difficult cases that can be seen in my hospital too; Chinese-American male in 70s with middle skull base fossa tumor, which had invaded into cavernous sinus partially, and Chinese-American female in 20s with giant front-temporal brain tumor (she had presented with chronic headache and double vision. Dr. Anderer suspected that she had glioma). Dr. Anderer and the PA finished these operations around two to three hours, only with loupe. Not needing microscope and finishing difficult cases in such short time compared with my hospital (in FMU, neurosurgeons often need about 10 hours, or in some cases, they need even more, for skull base surgery) were quite unusual and huge surprise for us. In addition, these patients did not show any obvious neurologic deficit and recovery was good in general. More surprisingly, the PA who assisted Dr. Anderer in all his operations performed skin incision and wound closure so quickly and precisely, without needing help from Dr. Anderer.

In the second day, we observed two patients –white female in 40s and white male in 70s, respectively- undergoing vertebral laminectomy to lumber disc herniation. Same as the first day, Dr. Anderer and the PA performed surgery with their sight relying on loupe only, and finished the both cases by noon. Plus, in these two surgery cases, a resident of orthopedics took part in operations as a part of his residency training. This also seems uncommon in Japan, where 'invisible barriers' sometimes exist between each department.

Being stunned by different approach from FMU, I missed chance to make questions at Maimonides. However, in the evening party held by JMSA at Dec. 11th, I made question about a patient's condition and surgery to Dr. Anderer. He mentioned that avoiding

damages on important anatomical structures (e.g. motor cortex, verbal cortex, cranial nerves etc.) is essential. He also told me that lesions which had invaded such areas should be left untouched to treat with chemotherapy and/or radiation therapy afterwards. It is not difficult for us to imagine that these are common principles for all neurosurgeons. Nevertheless, Dr. Anderer and his colleague's operations were unforgettable, exiting and interesting experiences for us because they had accomplished these principles in different measures from FMU.

Thanks to our visit to New York, I experienced different clinical approaches from Japan more closely than USNH, and at the same time, I also witnessed fine medical technology of the U.S. that supports these approaches and is comparable to Japan. In addition, more than anything, our motivations to the both daily works and future carrier get higher than before, thanks to New York. Meanwhile, I also feel five days are not long enough to study different clinical approaches from Japan, and advantages of the both clinical systems and medical education of the U.S. I would like to apply for another opportunity for training at longer duration in the U.S., if it will be available, because I want to grow my clinical ability and bring back lessons for my colleagues and junior folks.

In the end, I would like to express my sincere gratitude to Dr. Anzai and the other persons in JMSA, Dr. Anderer, Dr. Kamal Ramani, Mr. Tokiwa, Prof. Otani, Dr. Tabata and Dr. Kanno. Thank you very much for your support to provide us with such precious experiences.

(3) My Proposals Acquired from These Experiences

In my opinion, our experience at New York and USNH can be reflected to improvement of Japanese clinical systems and medical education.

Today, they claim that MDs are lacking at any regions and several specialties in Japan. Many measures have been taken but we cannot see satisfactory outcome yet. Prior to New York, we listened to Dr. Ramani's lecture at Sendai. He mentioned that even the U.S. interns tend to select hospitals in the huge cities. However, in case of the U.S., they can use foreigners to fill the lack of interns at countryside because foreigners can take exams of USMLE and take part in residency, according to Dr. Ramani. In contrast, such solution would not be accepted in Japan, due to people's general tendency etc. Therefore, we need to discuss measures to make residents/medical students want to work where they have graduated or been trained, or measures to attract residents/medical students from areas with huge population and overly sufficient numbers of MDs so seriously.

As one of solutions like above, I would like to recommend introducing U.S. style

medical education and residency program at Fukushima. When we had dinner with doctors of JMSA at Dec. 6th in New York, they pointed out that Japanese bed-side learning (BSL) is superficial. In U.S., medical students can attend clinical works more than japan but, in return, they are evaluated seriously. As a result, these evaluations are reflected on credits. Plus, the main principle of U.S. medical education/training is said to be as follows; "Starting with compliment and then pointing out mistakes. In the end, compliment again." I experienced this at the both New York and USNH, and think it is preferable.

On the other hand in Japan, we were just observer namely, at procedures, surgery and outpatient, when we attended BSL. We sometimes left behind by instructors without any indications. I also heard some classmates saying, "I wouldn't be at that department in the future because their atmosphere is terrible." Moreover, comparing my situation as a resident to the BSL, it is impossible for us to understand intensity of clinical practice and real streams of treatment sufficiently with Japanese BSL like today.

In my opinion, these factors shown above may make residents/medical students get away from FMU Hospital and the other facilities in Fukushima. Also, I would like to point out that such disadvantages mentioned above have been producing new residents who are confused in the start of their residency. Therefore, I would like to argue that breakthrough that overcomes such disadvantages can help Fukushima with difficult situation of clinical practice. As one of such breakthroughs, I would like to propose introducing U.S. style medical education and residency program.

Today, in Japan, social security issues including expanding national health expenditures become news headlines so often. When we took online lectures for public health field of national exam for MD license, the lecturer mentioned, "Although Japan has less MDs, they have too many beds for acute phase and patients' hospitalized duration is too long. In other word, most facilities fail in defining acute phase and chronic phase. As a result, they are consuming medical resources loosely. They are one of major contributor to expanding national health expenditures"

Ironically, I had sensed this reality a little in New York. Just like short hospitalized duration for post-C-section or post-vaginal labor patients, Dr. Anderer explained a patient with brain tumor about her hospitalized duration as follows; "You can go home in two days after surgery, if your condition allows." I was surprised to hear this. In Japan, partially due to a documentary film which was in theater about a decade ago, insurance situation of U.S. are generally thought to be the Dark Side of the Force. However, when you look from a different point of view, you may be able to make yourself

convinced, “Americans can carefully but clearly define the line between acute phase and chronic phase. As a result, the both patients and insurance companies are in win-win relationships. The former do not have to sacrifice their money and time, and the latter do not have to pay avoidable expenses.” Early discharge at remission of acute phase are not ready to be accepted in Japan yet, but I dare to propose this policy for salvaging today’s Japanese condition. Not to mention, national consensus for such a daring policy must be formed by fair process. All citizen of Japan and their government must recognize the reality that our social security infrastructure is at risk and will possibly be extinct in their descendant’s generation more seriously.