

Report on the 25th CAOS21 Group Meeting – Surgery and Facility Observation Tour

Schedule

August 6, 2015 (Thursday): Shinseikai Toyama Hospital, Imizu City, Toyama Prefecture

August 7, 2015 (Friday): Yokohama Hodogaya Central Hospital, Yokohama City, Kanagawa Prefecture

August 8, 2015 (Saturday): Ohashi Eye Center, Sapporo City, Hokkaido

Table of Contents

- 1 Introduction**
- 2 Shinseikai Toyama Hospital**
- 3 Yokohama Hodogaya Central Hospital**
- 4 Ohashi Eye Center**
- 5 JAMECS sightseeing tour**
- 6 Impression by surgeon**
- 7 Impression by participant**
- 8 Sponsor companies**

1 Introduction

During this meeting, a 3-day live surgery tour was arranged, enabling observation of diverse procedures for glaucoma surgery, recently advancing markedly. In addition, observation was possible also on recently highlighted vitreous surgery with OCT-fitted surgical microscope as well as live surgery for Toric IOL insertion making use of CALLISTO function.



2 Shinseikai Toyama Hospital

On the first day, the participants traveled on the recently opened Hokuriku Shinkansen super-express train to Toyama Station, from which they visited the Shinseikai Toyama Hospital (Imizu City) on a chartered bus.

This hospital was quite splendid, with the spirit of Buddhism (adopted by the hospital founder) serving as a principle of hospital management and slogans of Buddhism posted at many places within the hospital. The spirit of serving patients prevailed among the hospital staff members.

The Eye Center had a large space, fitted with various testing devices. The operating room was wide and rich in functions. Thus, each aspect of the Eye Center was not inferior to university hospitals. With the staff including 4 full-time physicians and 14 ORTs, the hospital was providing a thorough care system. There were 2 operating rooms (a larger and a smaller one), with the larger operating room large enough to accommodate all of our group members (about 20) with sufficient reserve space.



Report on the 25th CAOS21 Group Meeting – Surgery and Facility

To this facility, Dr. Makoto Aihara (an expert in glaucoma, recently becoming Professor of Ophthalmology, University of Tokyo Medical School) is invited as a guest surgeon. This facility was thus recommended as a facility most suitable for our group's visit in terms of equipment and environments, and we decided to observe outflow tract reconstruction surgery with the use of trabectome.

Dr. Naoko Tachi(Director of the Eye Center) is a student of Dr. Nobuchika Ogino and is now active as one of the few female surgeons specializing in volume vitreous surgery. The number of cases she performed vitreous surgery during last year was as large as 450 cases (including 284 cases of triple cataract surgery). It was an astounding number. Following recent introduction of an OCT-fitted surgical microscope to this facility, we arranged observation of live vitreous surgery with this microscope.

First, the group members observed outflow tract reconstruction surgery with the use of a trabecutome as well as triple cataract surgery conducted by Dr. Aihara. The presence of 20-odd observers (doctors and group secretariat members) in the operating room may have slightly intimidating effects on the surgeon.

During this visit, I observed surgery with a trabectome for the first time. It was impressive that the gonioscope provided a good operative field and the trabeculae were clearly incised with skillful manipulation. I remembered what Dr. S always said: "Surgery conducted by a master looks as if it could be done by everyone. But, there is a pitfall."

Intraoperatively, the cataract capsule broke accidentally. At that time, A-vit was not immediately arranged, but Dr. Aihara remained calm and dealt with the situation without confusion. It was an impressive event. Although Dr. Aihara said nothing, we may imagine that the event was painful for him. We reflect that we should have entered the operating room by dividing the total members into about 3 subgroups (as done usually in the past), while ensuring prohibition of private talks among observers within the operating room.

The second case pertained to trabeculectomy and triple cataract surgery. The operation was completed very smoothly, giving us an impression that surgery conducted by a master of glaucoma surgery differs also in terms of speed and completeness.

Because Dr. Aihara was scheduled to go to Kyushu after surgery, Q&A time was arranged within the operating room. With many questions placed, active discussion was made, thus allowing us to spend valuable time. Because of limited time availability for Dr. Aihara, we had to say goodbye although we were reluctant to stop discussion.

The third case pertained to vitreous surgery and triple cataract surgery with an OCT-fitted surgical microscope conducted by Dr.Naoko Tachi.

Vitreous surgery employed a 27G system with the use of a constellation. It was my first experience to observe vitreous surgery performed by a female volume surgeon. She performed surgery carefully and smoothly, as expected from a woman, and the degree of completeness of the operation was very high, endorsed by much experience.

Dr. Tachi emphasized the advantage of surgery under OCT image monitoring. However, since we are familiar with high resolution fine images yielded by latest OCT imaging, the images obtained did not satisfy me. Is this feeling confined to me or common for other participants in the meeting?



25th CAOS21 Group Meeting

3 Yokohama Hodogaya Central Hospital

On the second day, we returned from Toyama to Tokyo on the Hokuriku Shinkansen and took taxi from Yokohama Station to JCHO Yokohama Hodogaya Central Hospital.

This hospital was renamed in last April from the Yokohama Senin Insurance Hospital to Yokohama Hodogaya Central Hospital operated by the independent administrative corporation “Japan Community Health Care Organization.”

Dr. Satoshi Kobayashi (chief physician at the Department of Ophthalmology) at this hospital was recommended by our group's ex-Representative Dr. Mikio Inamura for presentation during our group meeting if the tube shunt surgery was set as a theme. Dr. Kobayashi accepted our request. Because this hospital was a facility operated by an independent administrative corporation, we asked Dr. Kobayashi for significant efforts to enable the meeting at this hospital. Thanks to the personality of Dr. Kobayashi, we were able to get cooperation from Hospital President Goto and other staff members, thus

realizing the meeting.

For this meeting, we asked Dr. Kobayashi to select indications under limited time availability. Dr. Kobayashi kindly made much effort to secure 3 cases for the meeting. We take this opportunity to thank Dr. Kobayashi for arranging 3 cases receiving surgery of different types under such limited circumstances.

Soon after our arrival at this hospital, Dr. Tetsuzo Otsubo (one of our members) began to greet hospital staff members intimately, saying “Hello, how are you?” or so. I was surprised but Dr. Otsubo told me that he had worked at this hospital before and was enjoying a return to his home ground full of familiar people.

Then, the operation by Dr. Kobayashi started. We visitors observed, divided into 3 subgroups, Express insertion surgery (1 eye), anterior chamber type Baerveldt tube shunt insertion (1 eye) and vitreous type Baerveldt tube shunt insertion (1 eye).

Dr. Kobayashi performed surgery beautifully. Without feeling pressure on live surgery, he performed surgery in natural slow of steps. As if talking to himself, Dr. Kobayashi explained essential points during the operation. Dr. Keisuke Nitta, standing just beside Dr. Kobayashi, was carefully taking memo of the surgeon's comments. When Dr. Kobayashi entered the spare operating room after completion of surgery, the doctors participating in this tour gave big hands and cheers. The high skill of Dr. Kobayashi was marked during this live surgery.

In any event, I learned the astonishingly high capability of Dr. Inamura in assessing the talent of surgeons because Dr. Kobayashi was recommended by him.



Report on the 25th CAOS21 Group Meeting – Surgery and Facility

4 Ohashi Eye Center

On the third day, we flied from the Haneda Airport to the New Chitose Airport and visited the Ohashi Eye Center in Sapporo City.

When this clinic was visited last year to observe surgery for blepharoptosis conducted by Dr. Nobuyuki Miyata, the clinic was still under remodeling. During this visit, we saw the grand new building completed. This time, we selected this clinic concurrently in memory of new building completion.



The new clinic was a splendid building characterized by glass-covered surface. It has two wide operating rooms. It also had three single-bed rooms for inpatients. The President Office and the Chief Secretary Office were astonishingly large.

This time, Dr. Tsutomu Ohashi attended the tour as a Chairman when visiting all tour sites. Today, he was additionally planned to serve as the surgeon. So, returned home immediately after arrival at the New Chitose Airport and prepared for the planned surgery while the other members of the group were taking lunch at a rotating belt Sushi shop. Dr. Ohashi fulfilled the severe role of arranging preparation for surgery and receiving the group members upon arrival at his clinic. We owe much to him.

Surgery by Dr. Ohashi was started. First, we observed cataract surgery and Toric IOL insertion surgery with the use of CALLISTO. We were initially concerned with the possibility that because of the tension arising from first attempt of live surgery in front of our group members, Dr. Ohashi's fingers might vibrate during the operation. In fact, however, I was impressed by Dr. Ohashi who carried out the operation unexpectedly calmly. During surgery for the first case, blood vessels were difficult to assess and Dr. Ohashi appeared to have difficulty in performing the operation while relying on the points marked in advance. In the second case, the axis of astigmatism had been clearly indicated and IOL was inserted in line with that axis. He said vascular assessment is not possible in 20-30% of all cases during this surgery. A majority of our members desired that the currently available devices would have a slightly higher capability of precise measurement corresponding to their high prices. The circle guide for CCC was rated as convenient



and very nice.

Next, the group members divided into 3 subgroups observed trabeculectomy, trabeculotomy and 360-degree suture trabeculotomy for treatment of glaucoma conducted by Dr. Yasuhiro Shinmei (Teaching Assistant, Hokkaido University Department of Ophthalmology).

Trabeculectomy, performed first, surprised us in that all steps of the procedure were completed using only a straight knife, without using any golf knife. Although many surgeons now use Grieshaber golf knife with high regular prices, I was impressed by the fact that Dr. Shinmei used only a straight knife for all of incision, flap preparation and trabeculectomy.

The second case pertained trabeculotomy. Although a metallic trabeculotome had been placed on both sides, it failed to appear into the anterior chamber despite rotation. Due to this accident, the procedure was converted to suture trabeculotomy.

For the third case, 360-degree suture trabeculotomy was performed. A viscoelastic material was infused via the inlet of the Schlemm's canal to allow smooth insertion. This was followed by insertion of knotted Nylon suture. Through 180-degree insertion and repetition in 2 directions (right and left),



25th CAOS21 Group Meeting

360-degree completion was achieved, and the trabeculae were smoothly cut, giving us an exciting impression. Both Case 1 and Case 2 were difficult cases but we observers of live surgery could feel the extraordinary will of Dr. Shinmei to achieve recovery patiently even under severe conditions at a visiting facility.

At the Keio Plaza Hotel, a case review meeting and party were held together with Dr. Ohashi and Dr. Shinmei. During the subsequent party, Dr. Ritsuko Fujiwara handed a bouquet to Chairman Dr. Ohashi and Mr. Hosokawa (Secretariat) in commemoration of the 25th anniversary of CAOS Group, followed by exchange of congratulations among the members.



Day 1: Shinseikai Toyama Hospital	19 members	}
Day 2: Yokohama Hodogaya Central Hospital	17 members	
Day 3: Ohashi Eye Center	16 members	

Total participants
23 members



5 JASMECS small sightseeing tour

On the day following the end of the CAOS meeting, a JASMECS small sightseeing tour was held as usual. Six members participated in this tour around Otaru City.

From South Otaru Station, the members took 3 guide taxis and left them in the vicinity of Kitaichi Glass. After walking around on the street, they visited the old Otaru Branch of the Bank of Japan. Then, they visited with much time the NYK Line Otaru Branch build-

ing (an European style stone-made two-story building designed by Mr. Shichijiro Satachi during the Meiji era and registered as an important culture asset by the state) under the explanation of the tour guide. The precious guest room and the conference room on the 2nd floor were full of attractive points, including the Yosegitsukuri style floor, blue-colored plaster-covered ceiling, chandelier with royal family symbol and gold-colored Japanese handpaper wall carrying the Chrysanthemum patterns.

Then, the members visited the herring mansion looks like the mansion used in the NHK's morning drama series "Massan." After watching the external appearance of this mansion, they visited the precious guest house (old Aoyama House) constructed by the Aoyama family (billionaire from herring) for a 17-year-old

daughter within the site of the herring mansion. These buildings were made of quite precious materials and it is now impossible to construct such buildings again even when woods are collected from across Japan.

At the end of the tour, the members made a toast with beer and rice wine at the Aotsuka Restaurant! They enjoyed the delicious herring baked with salt and marine products while receiving the wind from the sea on the face.



Report on the 25th CAOS21 Group Meeting – Surgery and Facility

6 Impression by surgeon



A Surgeon's Impression of the 25th CAOS 21 Meeting

Satoshi Kobayashi
JCHO Yokohama Hodogaya
Central Hospital

I was first informed about the CAOS21 Group in January this year. I met Mr. Hosokawa (JAMECS Inc.) through introduction by Dr. Inamura (ex-Chairman of the group) and was learned about this group. I remember to have been surprised by the list of facilities and surgeons visited by this group in the past. I had strong anxiety as to whether or not it would be allowed for me to participate in this group which involves so many well-known doctors. That was the starting point for me.

During the subsequent 7-month period until August when the first meeting after my participation in the group was scheduled, I continued to experience tension and anxiety and spent many nights unable to sleep due to the anxiety remembered by various triggers. Dr. Higuchi, Dr. Manabe and others caused additional pressure to me by saying: "CAOS Group is severe." When I consulted Dr. Inamura, he confessed to have experienced difficulty in live surgery, although he was known as a quite experienced doctor. He additionally told me dreadful experiences, including a case where the plan to check PEA was switched to total resection. On the basis of these experiences, I was advised by Dr. Inamura: "You should do at your own

pace, without matching the pace to surrounding people. Don't attempt to show you good-looking." When hearing that advice, I remembered a similar suggestion from my teacher Dr. Kadonosono many years ago when we were watching live survey at an overseas professional society meeting. At that time, he said: "Unexpected events can occur, but what is important is how to deal with the events. You should deal with each event sincerely, without deceiving anyone. You should let people see you as you are. If that is not accepted by people, there is no other choice." I remember that statement well even at present, because I had not expected to hear such a comment from Dr. Kadonosono who had tended to pretend to be stylish.

As a member of the group, what I first found to be difficult was collecting cases. The topic given to me was implants for glaucoma. So, I tried to collect 3 cases in total (1 case of Express and 2 cases of Baerveldt). There are relatively many cases using Baerveldt, but this operation is not performed frequently, with the frequency being 1 or 2 cases per month on average. Still more, cases requiring Baerveldt are often urgent cases where it is not possible to de-

lay treatment for several months. So, I relied on my fortune and waited for visit of such cases immediately before the planned meeting. I am not sure whether or not my routine good behaviors invited good fortune, but the cases visited my facility in a miraculous manner. Still more, there was a well-balanced combination of cases (one case of Express, one case of anterior chamber type Baerveldt and one case of vitreous body type Baerveldt).

On the day of the CAOS meeting, the doctors coming long way from Toyama during the record-breaking hot days lasting for one week looked like quite active, without any sign of fatigue. At that meeting, 17 participants were planned. I had not experienced performing surgery in the presence of so many observers (having experienced surgery only in front of a few observers). So, when the doctors entered the operating room, my tension intensified far more than I had imagined. Before start of surgery, Dr. Arai told me: "During live surgery, utilization of half of your real capability will suffice." Dr. Higuchi said: "Don't push too hard. Do as you routinely do." I received these encouraging comments with pleasure.

The first case used Express. Soon, I be-



25th CAOS21 Group Meeting

came aware of the severeness of CAOS Group because doctors watched my surgery from short distance. Some doctors stand just beside the microscope or behind me, checking the monitor and my hand motions. I was aware of elevation of my heart rate rather than that of the patient. Express was sold in an explosive manner soon after its launch based on the advertised features that surgery with Express is less invasive and simpler than trabeculectomy. However, due to the findings that the outcome of surgery with Express is not so good as advertised, its use has recently been decreasing. According to my impression, Express is expected to enable outcome comparable to trabeculectomy if the filtration volume at the end and postoperative management are made skillfully. Fortunately, my hands did not vibrate during the operation although blood loss was larger than expected, and I could complete the operation without any significant trouble. To cite baseball, I felt I got the first out. I feel considerably relaxed.

The second case used an anterior chamber Baerveldt. The calmness and slight confidence in myself did not last long, and I faced difficulty in controlling the extraocular muscles unexpectedly. Although I finally ended the operation without major trouble, the difficult at unexpected steps cause

much fatigue. Baerveldt had originally been acknowledged as a device for use in surgery for intractable glaucoma. But, the TVT study demonstrated that its outcome was better also in cases of trabeculectomy, in addition to intractable cases. Although carefulness as to the corneal endothelium is needed when the anterior chamber type is used, its indications are being expanded gradually, with the number of cases predicted to increase in the future.

Then, the last case. My physical fatigues had intensified but my tension was rising. I am practicing marathon as a hobby. The condition resembling runner's high prevailed at that time. Probably with some relationship to such high tension, I applied the knife too deep when creating a scleral flap, resulting in exposure of the ciliary body. I felt keenly that it is difficult to perform surgery with the routine method in all cases. Although I faced difficulty arising from such minor troubles also during surgery for the last case, I succeeded in completing the operations planned for that meeting. When I visited the neighboring waiting room to salute the doctors after completion of surgery for the last case, I was welcomed by big hands, which pleased me much.

Although there were many minor trou-

bles, I believe I could make my best. I am not sure whether I responded satisfactorily to the gathering doctors' expectation, I felt a strong sense of achievement and satisfaction while I had tension and anxiety. Such a large event was the first one in my career and I gained large confidence in myself through achieving the planned event. This will lead to my motivation from now on. I expect that this will be remembered a large turning point in my career in the future.

When I began surgery for glaucoma, trabeculectomy was still prevailing and I found no room for entering this field in the presence of many famous doctors. When the implant was approved 3 years ago, I thought it a good chance for me to enter this field. I think the attempts I started in those days earlier than other surgeons probably led to the outcome of my surgery during this meeting. Of course, this is not the end of my efforts. I hope I can utilize this experience for further step-up.

In closing this article, I would express my deep thanks to Dr. Ohashi and other doctors serving as Group Supervisors. My thanks are addressed also to staff members of JASMEC Inc., many doctors participating in the meeting and Dr. Inamura who recommended me for the group.



Report on the 25th CAOS21 Group Meeting – Surgery and Facility

7 Impression by participant



My Impression of the 25th CAOS21 Meeting

Akiyoshi Nitta
President, Nitta Ophthalmological Clinic

I am Nitta from Nitta Ophthalmological Clinic, Gunma. I am still a beginner in the CAOS21 Group and have just participated in the group's meeting for the third time. This time, I was asked by President Hosokawa to write my impression of the meeting probably because this meeting pertained to "full course of glaucoma."

My first impression about the whole of the 3-day meeting was "there was quite much information about glaucoma and I feel fully fed with information and experience." Before this meeting, I had slightly locked-up feeling about glaucoma. However, during the meeting, I learned presence of a variety of operative procedures and watched smooth implementation of such difficult procedures. I am now aware that I have still much to learn.

The first day of the meeting, CAOS was great indeed. On the first day, we traveled with Kagayaki to Toyama (the participants from Gunma caught up the Kagayaki members later by taking Hakutaka). Shinseikai Toyama Hospital was visited on the first day. I heard that this hospital had been founded on the basis of the spirit of Buddhism. I thought this hospital was based on the spirit of "benefiting oneself and benefiting others," i.e. the view that making other people

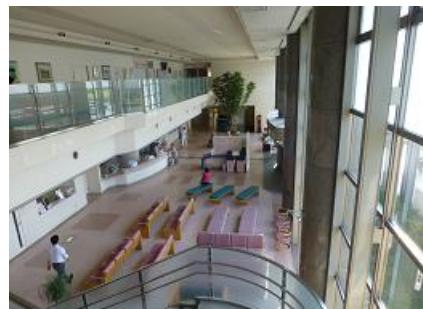
happy will make oneself also happy. The slogans of Buddhism were seen on the wall at many places of the hospital. One of them states: "Both fortune and honor are temporary lighting, leaving only a sigh of waking from dream." Seeing such a slogan, I felt "That's true." The slogan was persuasive to me who had not yet reached a stage of enlightenment at an age over 60.

The hospital, founded as a small clinic 20-odd years ago, is now a giant eye center. It has grown to a leading facility in Toyama Prefecture, performing the largest number of ophthalmological operations (cataracts, vitreous body, and glaucoma) in this prefecture. I was moved greatly by the efforts so far made by Dr. Tachi and other staff members. All of the hospital staff members were quite friendly, looking as if they were practicing the Buddhism spirit of serving patients.

When we entered the operating room, I found it quite wide. Although we had initially planned to make site tour in 3 groups, the plan was changed into simultaneous site tour of the operating room by 20 members at a time. Because a large number of visitors were entering the operating room at a time, personal talks among the visitors was prohibited. In practice, however, the noise of

personal talks did not cease for a while, resulting in an atmosphere in which the surgeons would find it difficult to concentrate them on the operation. I am now reflecting on such a behavior of the visitors. However, considering the stress of the physicians who were performing the operation while receiving the sharp gazes of 40 eyes of the visitors, I learn that an extraordinarily tough mind is needed to perform operation under such an environment.

The operation was first made was trabeculectomy and triple cataract surgery by Dr. Aihabara, who had become Professor at University of Tokyo. The device was inserted smoothly into the anterior chamber and incision on the right and left sides was completed easily. Insertion of a device into the anterior chamber via the 1.7 mm incision, without using any viscoelastic material, is originally not simple. Because there is an opening for perfusion at the base of the device, even a slight delay in manipulation may lead to inability of inserting the device because the anterior chamber will lost in the operative field. I was moved by the high skill of the surgeon having made this manipulation smoothly, showing no sign of difficulty. Furthermore, the anterior chamber angle was clearly visible, without distortion. I had an impression that the surgeon was familiar with this kind of operation because distortion is likely to occur, resulting in unclear view, depending on the angle of the gonioscope or the extent of compression. The manipulation for cataract surgery also



25th CAOS21 Group Meeting

looked experienced and efficient. Towards the end of the operation, a small break of the capsule occurred, but the surgeon dealt with it without panic, followed by insertion of the lens, to form a clear round pupil. They said that no 3-piece lens was in the stock at this hospital, and that there were 5 cases of broken capsule during the past 5-year period (one case out of about 1000 cases). They added that there was no problem even when a single-piece lens was inserted into the outer region.

The second case pertained to trabeculectomy and triple cataract surgery. With his procedure, no vertical incision is placed on the conjunctiva and incision is made only at the ring, so that formation of avascular bled may be suppressed. Recently, the scleral flap been getting smaller, and this probably makes vertical incision unnecessary. The way of preparing the flap plane reflects his familiarity with this operation. He was preparing the plane rapidly and precisely. A vertically long double-flap was created at the center of the relatively small scleral flap (3x3 mm or smaller). He commented, with laugh, that the double-flap was a kind of good luck charm. While the double-flap was raised skillfully, both side of the double-flap were cut upwards, to perform trabeculectomy. The flap was sutured with 4 stitches. He said he was attempting to perform suturing to an extent by which leakage would be caused by slight compression. He says that it would be fine if horizontal wrinkles of conjunctiva are formed at the ring when the manipulation is made while applying tension to right and left aspects of the conjunctiva. The time taken was just 20 minutes for triple surgery, which was surprisingly short for me. In case of trabeculectomy, postopera-

tive management is important. He says that the sutures are not removed on the following day, as a rule, and are removed one after another if the intraocular tension has exceeded 10. Log-term prognosis seems to be better if intraocular tension is guided to 10 or less by early removal of sutures. If all sutures are removed, the flap may be raised, occasionally resulting in overflow. So, it is essential to leave one suture at the ring. If intraocular hypotension develops, they say the flap is re-sutured with 10-0 Nylon round needle. He says this manipulation is easier under a slit-lamp biomicroscope because it provides three-dimensional views. I found this surgeon skillful because I did not know how to fix hands during this manipulation. Dr. Aihara had to travel to Kyushu soon after completion of this operation and was unable to attend to the post-meeting party although I had expected much of it. After answering the questions placed in short time from the visitors, he said goodbye to us in the operating room with the feeling of reluctant to leave. Dr. Aihara was often performing surgery in outside facilities like this hospital where there was no familiar operating room, familiar devices, familiar staff members and so on. I felt respect to the toughness and skill of Dr. Aihara required to achieve best performance without failure under such circumstances.

Case 3 pertained to vitreous surgery and triple cataract surgery performed by Dr. Naoko Tachi. First, I had an impression that the cataract surgery was performed quite calmly, with each manipulation careful and friendly to the eyeball. Even when the iris fell into the wound, the surgeon calmly performed CORE Vx and lowered the vitreous body pressure, followed by careful reduction

of the iris and suturing of the wound without hesitation. I thought that if I were the surgeon in this case, I would spend time in using Hydro and attempt to skip suturing. I felt respect to the courage of this surgeon who selected safe and reliable suturing without hesitation in the presence of many visitors. A 27G system was adopted for vitreous surgery (Vx). Operation was ERM. ILM was taken extensively with the use of BBG at the same time. She says extensive ILM taking is useful in preventing recurrence. I had an impression that the surgeon aimed at thorough operation even in case of ERM which is originally known to involve low incidence of recurrence. An overall impression I had about Vx was that the operation was carried out quite carefully. Also during my attendance to the previous CAOS meeting, the surgeons were performing Vx very fast, about 8 times as fast, probably because they had been accustomed to this kind of operation. There may be such an approach to this operation, but this time I felt that there is also a way of operation resembling a quiet flow as adopted by Dr. Tachi. Was I the only visitor who felt that although Dr. Tachi had the skill to perform this operation rapidly if desired, she intentionally avoided rapid operation probably reflecting the spirit of Shinseikai which attaches importance to remaining friendly to patients? During the discussion meeting, I was surprised to know that leakage from the surrounding blood vessels had occurred in 25 of the 99 patients diagnosed with idiopathic ERM who underwent fluorescein fundus radiography FPP). I have experienced with delayed CME after idiopathic ERM removal, but I became aware of the possibility that the cases I had encountered might be cases of ERM secondary to uveitis. I was



Report on the 25th CAOS21 Group Meeting – Surgery and Facility

impressed much by the posture of this surgeon, actively involved in clinical studies and performing FFP on all cases although FFP is generally not performed frequently even in DM cases. There were many physicians interested in OCT-fitted microscopes among the visitors and they placed questions. My impression is that this procedure is unlikely to spread for a reason of price unless it can be performed more simply with a precision level comparable to SSOCT.

Dr. Ueda, serving as the assistant, is a young and spirited doctor having graduated from Osaka University. I felt that he is an able doctor who may play a significant role in the future of the Shinseikai Toyama Hospital. He answered each question smoothly. During the tour through the hospital, I noted a syllabus for each operation, which had been prepared quite well. I asked a big favor to the secretariat and received a photocopy of the syllabus. This is probably a nice souvenir of CAOS meeting, isn't it? In addition to observing the operation, learning the scale of the eye center, the principle of the hospital, and the posture of hospital staff members was beneficial to me. Thus, the first day ended with valuable site tour.

We had dinner at an old Japanese restaurant "Matsuya Honten," enjoying the quite delicious dishes making use of the food-stuffs of local origin. Local rice wine fitted the dishes well, resulting in overdrinking from the first day of the tour.

On the second day, I was sleepy and in slight handover, as is often seen. The tour with a hard schedule began with yesterday's fatigue partially remained. We move to Yokohama by Kagayaki. On our way to Yokohama, I tried to sleep so that I might feel sleepy after arriving at Yokohama. Before we reached Yokohama Bay Sheraton Hotel, Dr. Takayama lost his way. Last year, I and Dr.

Takayama went astray and were guided by another member to the right place. President Hosokawa walked very rapidly for his age (75 years). I, living in Gunma, heavily rely on vehicles and seldom walk. So, I cannot follow the rapidly walking President unless I attempt to walk considerably faster than usual. An advantage of CAOS Group lies in that a physical check of members is also done in this way.

We took taxi, which brought us to the Yokohama Hodogaya Central Hospital located on the top of the curved slope. It was the place for site tour on the second day. Dr. Otsubo from the Takasago Eye Clinic, where I had worked until several years before, told me that the hospital had undergone interior remodeling. However, when I looked at it, there was no sign of recent remodeling. The medical facilities I had previously visited as a member of CAOS Group were often quite superb facilities and I usually returned home with inferiority complex. However, the Hodogaya Central Hospital smelled of the Showa era, letting me remember that everyone had worked at such hospitals in the past. It was a hospital with relaxing atmosphere. However, staff members were working lively, making me feel that education had been provided sufficiently to staff members.

An overall impression I had from observation of the operation on the second day was that "innate talent" was recognized again. Dr. Satoshi Kobayashi, the chief ophthalmologist performing the operation, was still young, with only a 10-year career as an ophthalmologist. However, his skill looked not inferior to the skill of any ophthalmologist in any district of Japan.

The first case operated was express insertion into exfoliation glaucoma. Hemostasis

was achieved satisfactorily, and traction was optimal, without excessive force, resulting in a clear operative field. Scleral flap preparation looked slow at a glance, but a wide range of the plane was prepared with a single manipulation, resulting in a clear flap formation quite rapidly. Success or failure in express insertion depends on accuracy of insertion. The surgeon inserted a 26G needle without hesitation and moves the needle twice or three times, followed by express insertion without resistance. According to my experience, strong resistance tends to hamper smooth insertion even after opening with a 25G needle. So, I had a question why such smooth insertion is possible. Does the secret of this manipulation lies in repeating the "to and from motions" for 2-3 sessions? I wanted to have an opportunity of learning how to make such a manipulation. Scleral suturing was completed with 2 stitches. I felt that this way of doing, which could complete the procedure with minimum necessary steps was supported by the surgeon's confidence based on experience with a considerably large number of cases.

Baerveldt tube insertion was done for Case 2 and 3. Case 2 had received trabeculectomy and ciliary destruction surgery (each once). In addition, the palpebral fissure was narrow and blood loss was large, accompanied by difficulty in getting clear operative field and identifying the extraocular muscles. Thus, tube insertion looked difficult. However, Baerveldt tube is mostly used for patients having undergone multiple operations, and Dr. Kobayashi carried out the operation calmly without haste, probably because he had been well experienced with such a case. In the past, the scleral flap to cover the tube was difficult to obtain. Now, it can be acquired easily through a formal route. I had thought that use of preserved



25th CAOS21 Group Meeting

sclera had become a norm. During this visit, Dr. Kobayashi told that he had always been preparing an autologous scleral flap. Hearing this, I understood that it has been possible for Dr. Kobayashi to continue operation without facing difficulty in securing a saved sclera. The autologous scleral flap requires preparation of half-layer flap with dimensions of about 6x6 mm. It is not easy to prepare a flap of this size uniformly. However, every time the surgeon moved the knife to large extent along the curved eyeball, the sclera was incised successfully, allowing a large scleral half-layer flap in short time. When I perform this procedure, the area incised by a single motion of the knife tends to be small along the largely curved eyeball because of the fear of cutting too deeply or too superficially. However, Dr. Kobayashi incised it smoothly and efficiently with large knife motions. I felt his talent in this manipulation. The angle for insertion into the anterior chamber is delicate. If it is biased to the corneal side, there is a concern with the endothelium. Insertion involving the iris is also unfavorable. Dr. Kobayashi made insertion skillfully in a manner barely touching the iris. It was nice that the position allowing just fitting at the time of subsequent flap suturing was calculated in advance and insertion was made on the basis of such calculation. He told me that also with the autologous scleral flap, the sclera used had been decreasing in thickness, resulting in no trouble involving tube exposure in case of anterior chamber type operation. Also when a saved sclera is used, there are cases where the thickness decreases much in short time, probably due to immune reactions although not sure. If there is no trouble with the use of autologous sclera at

least free of immune reactions, I think the technique of Dr. Kobayashi may be also advisable.

Case 3 was a DM patient with neovascular glaucoma having undergone vitreous surgery. Like in Case 2, an autologous scleral flap was created in this case, followed by insertion of an anterior chamber type Baerveldt tube SG101-350. I later learned from the doctor that the Baerveldt tube for vitreous body has a thick square process at the sclera insertion point, and he had experienced a case where the process became exposed from the scleral flap before. The doctor thus makes it a rule to use an anterior chamber type tube. After checking the presence/absence of incarceration of vitreous body around the tube following insertion into the vitreous body, he cut it slightly. During the subsequent discussion meeting, sharp questions were placed, including whether or not the vitreous body at the tip of the tube had been removed sufficiently during the procedure. I felt that the technique of Dr. Kobayashi related to scleral flap suturing was also perfect in terms of biting, depth, degree of fastening, speed and so on. We hear that in recent years, the opportunities of suturing have decreased markedly, resulting in increase of young physicians unable to perform suturing satisfactorily. I think young doctors like Dr. Kobayashi who can perform suturing so well are now rare.

During the discussion meeting, I asked Dr. Kobayashi as to why he began tube shunt surgery. His answer was that because many senior doctors had been involved in existing operative techniques as represented by trabeculectomy and numerous reports had been published about

such techniques, he did not find a large potential in such techniques as a newcomer. He then predicted that if tube shunt surgery, which had just been approved in those days, was started, he would be able to find a place of his active involvement because all doctors were at the same start line. I think this prediction made by Dr. Kobayashi was a right answer. There are many universities conducting research specializing in glaucoma and there is no room for entry by beginners in the research related to long-term prognosis or so. Furthermore, although this may be an exaggeration of mine, there seems to be strange "parties" or groups formed by researchers. I respect the keen insight of Dr. Kobayashi who found tube shunt surgery as a field where young physicians can work actively without restriction by old traditions and who have worked with large efforts in this field. Of course, his current status is attributable to his innate talent combined with efforts for its development and the work of treating patients without betraying the expectation of referring doctors. I hope Dr. Kobayashi will continue his active work in this field.

The dinner on the second day was taken at a Chinese restaurant unique to Yokohama. Within the China Town full of people and conversation in Chinese language, we enjoyed delicious dishes at a very quiet and relaxing restaurant named "Heichinro." After dinner, we went to the Sky Lounge at 28F of the Bay Sheraton Hotel, where we drank wine one glass after another just like Wankosoba (a timely expression proposed by Dr. Otsubo) although this may not fit a hotel lounge. When I wake, I was on bed in my hotel room. There



Report on the 25th CAOS21 Group Meeting – Surgery and Facility

were a bottle of Pocari Sweat and a jar of water at the bedside. I thought I had made no progress in my way of living (taken care by a junior member of our club in the past and by my son now).

On the third day, the last day of this tour, I traveled to Sapporo with unclear head due to hangover, insufficient sleep and accumulated fatigue. On the face of Chairman Ohashi, smile had disappeared since last dinner. Soon after arriving at Sapporo, he left us by taking a car. His back looked like slightly smaller than usual. This was the first time I had such an impression about him. I imagined that the operation in the presence of many members of the CAOS Group was highly stressful even for Chairman Ohashi known as a mentally tough man. On that day, we first took lunch at a rotating belt Sushi shop. The rotating belt Sushi shops in Hokkaido are not comparable to those in Gunma. We could not help eat excessively. The Sushi ordered in quite large amounts (not considering the possibility of eating them completely) by the group of Dr. Fujimoto was partially circulated to us and we ate them to a full stomach. Dr. Matsumoto experienced this kind of Sushi shop for the first time and he looked satisfied. It would be best if we could take a nap after this lunch. But, we could not make Chairman Ohashi wait because he was waiting for our arrival with some tension. So, we walked to Ohashi Eye Center on foot. The clear wind without moisture was pleasant and we were enjoying walking in summer at Hokkaido. Soon, a remodeled building of Ohashi Eye Center appeared on the opposite side of the street. It reflected the sunlight and looked very beautiful and splendid. I thought deep in mind that this was the hospital constructed by Dr. Ohashi with his 15-year-long plan. I

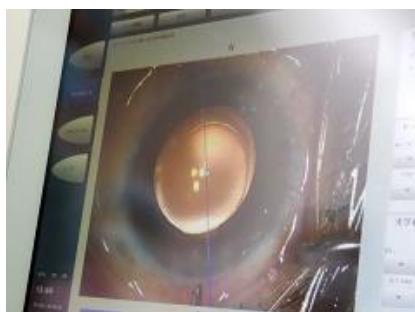
found it nice. I would like to take this opportunity of expressing saying congratulations to Dr. Ohashi.

Entering the clinic, I was surprised by the quite large space and the abundant equipment. Even the second operating room, which had not begun to be used, looked like twice as large as my clinic. I thought that if the two operating rooms were put into full use, Dr. Ohashi would be able to buy a complete set of winery in France. First, I paid attention to the surgery with toric lens performed by Dr. Ohashi. It reflected the enthusiasm of Dr. Ohashi, saying: "Cataract surgery is refractive surgery. A key is how to satisfy the patient without correction with glasses, etc." Dr. Ohashi was not satisfied with the menu of prior tests which looked like perfect for me. In addition to these tests, Dr. Ohashi used the CALLISTO function, capable of projecting the axis of astigmatism intraoperatively (a function fitted in the ZEISS new microscope) and presented an operation aimed at achieving utmost precision. After the initial attempt of forming a circle with CCC, IOL is inserted and the viscoelastic material behind the lens is removed completely. Then, the viscoelastic material is slightly entered in front of the lens, followed by approximately 2 turns of the lens. I later heard that this turn is aimed at scraping out the viscoelastic material remaining in the loop. If done so, lens bias after surgery can be prevented, he said. I was surprised by his interest in such delicate aspects. During the postoperative discussion, he presented us how the lens bias would reduce visual function using slide-based simulation. It was well understandable. It seems that this ZEISS system does not work well unless 360-degree full-circumference image of the clear vessels at

the ring is taken with an IOL Master 700. The first case had conjunctival loosening and, after insertion of IOL to this case, the staff members were making delicate adjustments until immediately before fixation. The second case allowed clear imaging and smooth decision of the angle. ZEISS staff said that 360-degree imaging is possible only in about 70-80% of Japanese patients. I thought it better if this device would be improved to enable clear imaging even in Japanese patients with narrow palpebral fissure. I heard that the postoperative data indicate the precision level of only one degree error. Such a precise operation made me shameful because an error of about 5 degrees had been viewed acceptable by me.

The last program of this 3-day course was glaucoma surgery by Dr. Yasuhiro Shinmei (Hokkaido University). Hokkaido University is famous not only for the gourmet Dr. Chin but also for 360-degree suture trabeculotomy. I was interested in observing the skills adopted for this surgery because I had never seen it before.

The first case underwent ordinary trabeculectomy. I had an impression that bleeding in the operative field was markedly massive. I imagined that excessive bipolar use could stimulate scar adhesion, the surgeon intentionally attempted to decrease its use. In fact, however, I heard during the postoperative discussion that such bleeding was unavoidable because the device for hemostasis was not available in a timely fashion. At the same time, the doctor pointed out the necessity of taking care because bipolar application to the scleral flap after preparation can cause shrinkage and deformation of the flap, eventually leading to anastomotic failure. What surprised me was



25th CAOS21 Group Meeting

that the surgeon performed all of scleral half-layer incision, scleral flap preparation and trabeculectomy with only one straight knife. He added that the straight knife is convenient for the flap because it allows more delicate control of depth. Indeed, during trabeculotomy, the surgeon began to increase the depth of incision approximately when slightly more than half of the flap had been created. However, it is difficult to prepare a fine plane without steps using a single knife. I felt that this surgeon had experienced with surgery in a considerably large number of cases. It was also surprising to me that the surgeon's knife entered deep through the 2-plane incision of the sclera, immediately followed by trabeculectomy. I imagined the surgeon would cut through the tissue in the popular form of short strips, and I was unable to know well when trabeculectomy was performed. At the time of conjunctival suturing, it was impressive for me that block suture was placed at 2 sites in the vertical direction and the direction towards the ring. I interpreted this as being aimed at guiding the humor backwards, with care taken to avoid early lateral flow of humor. I thought that the surgeon took upmost care to avoid such a trouble. When the humor was accommodated into the anterior chamber, I thought the operation was just to be completed. At that time, however, a defect was found in the conjunctiva above the flap. Because the Tenon's capsule had retracted and was absent in that area, it was not possible to perform suturing between thin conjunctival tissues. I closely watched the procedure, to learn how the surgeon was going to make recovery. If I were the surgeon, I would cut the conjunctival suture

and free the retracted Tenon's capsule from the conjunctiva and sclera, followed by guiding the Tenon's capsule to the ring for suturing and subsequent conjunctiva-Tenon's capsule-conjunctiva suturing to close the hole. This surgeon, however, placed the block suture beside the defect so that humor would not circulate through the defect. I was astonished by the presence of such a way of recovery. This was rational because the outcome would not differ even when half of the flap was sacrificed, because the intraocular tension is expected to decease sufficiently even when the area of humor flow is small. What was more surprising to me was the tough mind of Dr. Shinmei who calmly dealt with such a trouble. I thought such an action would be difficult for a timid surgeon like me.

The second case underwent ordinary trabeculotomy. The operation was started with incision below the ear. The patient was quite advanced (93 years old). Imagined that to prepare for failure in satisfactory entry of trabeculotome, the surgeon would make an approach from upside to enable conversion of the operation into trabeculectomy or EX-Press. This was the imagination based on my own experience with difficulty in satisfactory entry in both directions. A veteran surgeon like Dr. Shinmei probably does not bear in mind the possibility of failed attempted of insertion. He said that insertion would be easier if a Healon 30G blunt needle is inserted into the Schlemm's canal before trabeculotome insertion. In practice, however, smooth insertion of the trabeculotome was not possible until the end, for an unknown reason. Furthermore, the resistance dur-

ing rotation was very strong, and the metallic trabeculotome did not appear within the anterior chamber. If I face such resistance, I will probably consider failure in needle insertion into the Schlemm's canal and close the wound to perform upper trabeculectomy instead of trabeculotomy. The surgeon, however, arranged a 5-0 Nylon and began to modify the procedure into suture trabeculotomy. After insertion of about half of the 5-0 Nylon, he completed half trabeculotomy. I was impressed by this spirit of never giving up.

The third case was planned to undergo 360-degree suture trabeculotomy. There was no problem until 5-0 Nylon was inserted. But, its 360-degree rotation was not possible. The suture did not appear from the opposite side. Was Dr. Shinmei under the influence of some demon on that day? However, such a trouble gives us observers a chance of learning how to perform recovery (sorry for Dr. Shinmei). We can see many successful cases at professional society meetings. But, there is hardly any chance to observe a method of recovery from a trouble as a live scene. Dr. Shinmei inserted Nylon suture from right and left ends to a maximum degree, followed by trabeculotomy. It was quite impressive that the trabeculae were cut smoothly, without resistance. At that time, I remembered the comment and simple video presentation made by Dr. Chin during a professional society meeting, saying that even when full-circumferential rotation is not possible, insertion to a maximum possible extent will allow the tip of the suture to serve as an anchor and enable cutting to that point without problems. If the incisions from two



Report on the 25th CAOS21 Group Meeting – Surgery and Facility

directions were totaled, an approximately 350-degree incision had been achieved. Observing such a wonderful way of recovery is also an advantage of CAOS Group. In any event, the mental toughness of Dr. Shinmei, who remained calm throughout the procedure, is astonishing. I could not hear from the doctor how we can acquire such toughness.

During the postoperative discussion, I placed a slightly nasty question, saying: "What will you do if a larger defect has been formed immediately above the scleral flap?" At that time, the doctor immediately answered that the conjunctiva will be moved to the ring. He added that for pin-point hemostasis, bipolar for vitreous body is effective. He gave brief explanation to various questions placed by members like us who were poor in knowledge.

In the subsequent party at the Keio Plaza Hotel, Dr. Ritsuko Fujiwara made a warm speech (characteristic for a woman) and presented a bouquet to Chairman Ohashi and also to President Hosokawa (a person

who really contributed much to this meeting). During the party, Dr. Ohashi, refreshed from the yesterday's unfavorable condition, enjoyed drinking wine. The last party was ended under a warm atmosphere.

But the CAOS meeting does not end at this stage. During the subsequent second party, the members enjoyed much wine and ate Chinese noodle as a night snack, followed by Karaoke time, just resembling setting off the starmine, to end the 3-day CAOS meeting. Can you fight for 72 hours? By making full participation in the CAOS meeting, I confirm that my physical strength will have no problem for the coming year.

In closing this article, I would express my thanks to President Hosokawa and other staff members of JAMECS Inc. We cannot find any other training course so rich as this one. If I had begun participating in this group ten-odd years earlier, I would have become a clinician differing at least slightly from what I am now. I regret it much. For this reason, I advised my son to participate in this meeting.

There is a Japanese proverb that iron should be blown to increase hardness while it is still hot. That is true. At my current age, I am bold enough and remain unaffected by some stress. However, if this nature acts inversely, an individual cannot change or make progress, thus leading to an unfavorable direction. I think my son learned much during this training. Site tour and talks with senior doctors full of unique personality rare at university were probably valuable to him. I and my son thank you very much.

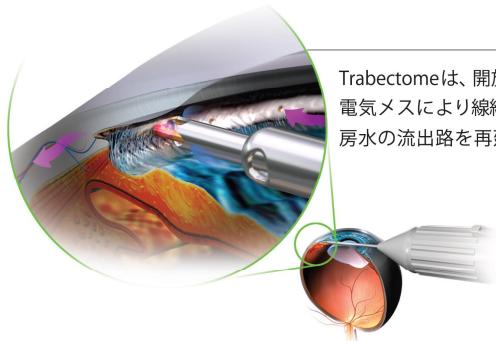
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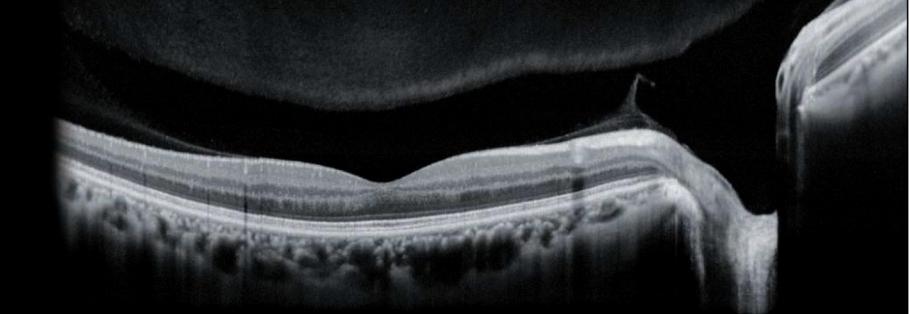
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