



SSAT Traveling Fellowship for Surgeons in Academic Practice in the US or Canada

Japan 2004

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Report for the Traveling Fellowship for Academic Surgeons from the United States and Canada

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Travel dates: December 6th through December 22nd 2004

Purpose: Travel to Japan to participate in the ISDS congress and visit surgical centers to learn about the technique and training for laparoscopic gastric resections and endoscopic mucosal resections

Day 1: Flight from San Antonio, Texas to Narita International Airport near Tokyo, Japan. Arriving in Tokyo besides customs and immigration the health inspection had to be passed. After exchanging the Japan Rail train vouchers we took the Narita express to Yokohama and the Pan Pacifico hotel, at the site of the 19th ISDS congress. The Intercontinental and Pan Pacifico complex is a very nice conference site, excellent hotel.

The congress was dominated by Japanese participants, followed by Korean and Chinese delegations. More Asian women presenters than I had expected. It was quite amazing to see several Japanese surgeons discuss the best indication and way of laparoscopic assisted gastrectomy. Other highlights were the introduction of an endoscope prototype with separately swiveling electro-knife and grasper, allowing a very elegant endoscopic submucosal resection for mucosal lesions. Interesting was also the level of debate over inter-sphincteric LAR or excision of the superior part of the external sphincter with immediate repair for low sitting rectal CA to obtain adequate lateral margins. A further highlight was one of the ISDS feature lectures, held by Sir Ara Darzi, who is instrumental for laparoscopic surgical training in the UK. He showed several interesting models, including measurement devices for the economy of extremity movement, box trainers, color coded hand motion observation, quality of the training product,

computer use etc. Discussion ensued with Dr Fried from Toronto who later told me that he remains biased towards the box trainers secondary to their flexibility, reliability and affordability.

On Friday, my presentation about the use of ERCP and laparoscopic common bile duct exploration in a rural area of the United States went well; Dr Lau was friendly enough to ask about the use of MRCP for common bile duct stones. Only much later did I understand why he was so surprised about our findings and the modest use of MRCP.

On Saturday we entered the world of the bullet trains, shinkansen. We traversed over 800 miles in 5 hours at maximum speeds of 285 km/h, while eating a beautifully packaged box lunch aboard the train. We traveled south to Kyushu Island to visit surgical centers in Fukuoka and Oita. The remainder of the weekend we spent in a traditional Japanese Inn on our own, experiencing a traditional Japanese dinner, sleeping and living quarters.

Monday I spent in Dr Masao Tanaka's surgery dept at Kyushu University in Fukuoka. Dr Shuji Shimizu, the chief of surgical endoscopy in the department, interpreted for me while observing a laparoscopic assisted total gastrectomy (LATG) for proximal early gastric CA, a technically very interesting procedure. After transecting the duodenum with an endo-GIA stapler, Dr Noshiro performed a stapled esophago-jejunosomy, side to side, functional end to end using extracorporeally tied stay sutures and a roticulating Endo-GIA. Beautiful dissection with a long esophageal component and retrocolic anastomosis for the Roux-en-Y-limb. After the anastomosis was created, the proximal stomach was divided and a 4 cm vertical epigastric

incision made to extract the specimen and hand-sew the jejunojejunostomy.

Then a laparoscopic cholecystectomy was performed as the patients original symptoms were attributed to symptomatic cholelithiasis. At this point I learned, that at Kyushu University Hospital all patients undergoing laparoscopic cholecystectomy have their bile duct cleared either by MRCP, ERCP or iv cholangiography preoperatively. No wonder Dr Lau was surprised that our paper found it worth while to discuss the use of different modalities for unsuspected choledocholithiasis.

The same thorough preparation held true for the preoperative work-up for the gastric resection. There were endoscopy images, endoscopic ultrasound images, barium swallow studies of excellent quality, KUB, CXR and CT scan all present in the operating room. The operation was performed by the division chief and his associate director. A second year resident (female) guided the camera and did an excellent job. I was informed, that if she were to underperform that would result in significant stress for her. However in her case, everybody was pleased and had noted so. The intern was allowed to observe in the operating theater and obtain intraoperative pictures from the digital equipment but by no means allowed to participate in a surgical procedure, as they were considered not educated or mature enough. The senior medical student was permitted to observe in the second row. I was told the residents spend in average 1-2 years observing and studying the procedures before being advanced to the box trainers and the animal lab. As senior residents they may start assisting in the procedures, and as fellows or junior faculty start performing procedures as surgeons.

In the endoscopy suite I was able to observe an endoscopic mucosal resection (EMR) in a patient with an early gastric cancer. Biopsies and endoscopic ultrasound had been performed and this was deemed to be a well differentiated Cancer in the mucosal layer only with no ulcerative or signet ring features. An overtube with a snare was used after extensive diagnostics with indigo-carmin and cresylviolet. A substantial hole resulted (specimen size ~2cm) which was then closed with clips.

The following day I spent in the endoscopy suite with Dr Shinihiro Yada who had spent some time at Northwestern in Chicago and in San Diego. The endoscopic unit sees about 10,000 patients with procedures/year, the majority EGD, with several gastroenterologists and some surgeons.

Two EMR in early colon cancer were performed, being preceded by extensive "pit diagnostics". Both procedures were performed by high ranking members of the gastroenterology department, no resident anywhere in site. One fellow performed a EUS on a patient with IDPM, the exam was promptly repeated by the senior faculty.

The faculty who performed the EMR also took the time to pin the specimen on a foam cushion before everything was fixed in formaldehyde.

Later that day we left for Oita, to visit with Dr Kitano and his group at the Oita University Medical Faculty. There I learned that a big part of Japanese medicine had been imported from Germany at the turn of the century and until 20 years ago all H&P's had to be written in German.

Dr Kitano is quite involved in the Japanese colon cancer and advanced gastric cancer trials and will be organizing the 11th World Congress of Endoscopic Surgery in Yokohama in 2008.

In the operating theater I was able to observe a laparoscopic cholecystectomy followed by a distal gastrectomy with BI anastomosis for early gastric cancer with signet ring cell features. The dissection of the gallbladder as well as the stomach was performed by Dr Kitano. 14 people were in the room and available to assist in different functions. Two further faculty members assisted with the dissection and guided the camera; a resident was available to hold the liver retractor and later the camera for the open part of the procedure. Two scrub techs and a scrub tech student, and one other surgeon, as well as nurses, technical assistance for the scopes etc. Despite all this preparedness the Bovie did not want to cooperate, the foot pedal was in the wrong position and the suction catheter was kinked. It was very interesting to see how assertive the surgeons were with the harmonic scalpel essentially hugging large vascular structures with the blade and using the frontal cavitation effect to their advantage.

Surprisingly, the maximum insufflation pressure required was 8-10, the laparoscopic cholecystectomy was performed in the supine position, only for the gastric dissection a moderate reverse Trendelenburg position was used.

Everybody with a BMI >24.2 is here considered overweight and incurs a higher risk for conversion and blood loss.

After the gastric dissection was performed a small epigastric incision was made, using the skin

protector and the stomach extracted, still in continuity with the esophagus and duodenum. A GIA stapler was used proximally and the duodenum was divided distally between clamps. Dr Kitano left the operation at this point to have it finished by his senior faculty. We walked over to the next operating room where the fellow was performing a laparoscopic assisted colectomy, having completed his dissection and now attempting to extract the still connected colon with a sizable sigmoid tumor. The mesentery appeared a little thicker than I had seen in the other Japanese patients and a little foreshortened because of that. He struggled for quite a while and had to extend his paramedian incision twice. The question why they would not transect the colon distally first to make the extraction easier was not answered.

We finished our visit to Japan with a weekend of sightseeing in Kyoto on our own and returned back to San Antonio through Tokyo.