

Endoscopic ultrasound training in mid-to-late career: Falling prey to the dark side or the bright side?

Sir,

When I decided finally to take the plunge into endoscopic ultrasound (EUS) world, I heard the not so subtle whispers: It's a mid-life crisis or a mid-career crisis. Those explanations are far too simplistic. One must realize that my career had intersected with EUS many times but never took hold. My first introduction to EUS was during advanced endoscopic retrograde cholangiopancreatography (ERCP) training from 1992 to 1993. A small side room was equipped with an early mechanical radial echoendoscope. The images were suboptimal, the cases few and the emphasis at that time (including my own) was on ERCP. None of us could have predicted then what we are seeing now.

Hence, I began an ERCP/advanced therapeutic practice at an academic center in 1993. There was no EUS equipment at my center, not uncommon at the time. Interestingly, a young Paul Fockens visited our center in 1993 or 1994 and nicely demonstrated some diagnostic cases with industry-loaned equipment. However, still, nothing really took hold for me.

Somewhere around 1996 we decided to purchase a linear echoendoscope at the Veteran's Administration Hospital. A radiologist and I tried, unsuccessfully, to slay the EUS training dragon. Frustration ensued, and the machine and its whereabouts remain unknown to me.

After moving on to my next academic destination in 1998, I was again exposed to EUS. Yet another, brief attempt at learning EUS came and went. There appeared no need, as staging and tissue acquisition

predominated, and it seemed needless for a therapeutic endoscopist to pursue it further.

Over the years, I watched the expansion of EUS and read about the eventual "marriage" of EUS and ERCP. All the while, I relied on my motto as being "an interventional radiologist with an endoscope." Pancreatic fluid collection drainage, even small size collections, could be identified and drained with knowledge of computed tomography anatomy and combined endoscopic, fluoroscopic orientation.^[1-4] Transmural drainage of nonpancreatic collections without EUS was also feasible.^[5-8] Biliary cannulation rarely failed, even with the postsurgical anatomy. Percutaneous approaches were easy and rapid when ERCP failed while rendezvous EUS/ERCP procedures seemed to take hours.

However, ultimately it became apparent to me that EUS training was necessary for providing more broad therapeutic interventions. Not infrequently over the years I was on the guide wire side of the echoendoscopy/ERCP procedures. The tools available for therapeutic echo endoscopy were not yet available to provide rapid and seamless interventions. With time, however, the converse was seen. There were no new tools for ERCP-guided puncture and drainage (in fact, even less as some available duodenoscope puncture needles were taken off the market).^[9] Increasingly, industry has come to accept and embrace EUS-guided interventions and the move to more easily achievable, and loftier interventions was upon us. After witnessing an impressively performed 7 min start-to-finish EUS-guided choledochoduodenostomy in Rome by Alberto Larghi in early 2013, I realized "the future is now." With the reports of EUS-guided interventions such as gallbladder drainage^[10-12] and transgastric pancreatic ductal interventions coupled with new tools (accessories and devices) it became more obvious that therapeutic EUS was here to stay. As an interventional endoscopist one cannot ignore what is being done and envision what can be done. That coupled with the

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admitted fear of becoming obsolete led me to train in EUS.

The training process is now exactly at 1-year and across three continents. It has not been an easy road. Training in EUS is not an age problem. Yes, I am here to say you can “teach old dog new tricks.” It is more of a matter of logistics. Training programs are not designed to teach established gastroenterologists. Many programs are already equipped with established endosonographers and do not envision a need to train additional endosonographers. Institutions realize that money is lost when allowing a full-time gastroenterologist to take time away from their practice for additional training.

I chose to train mostly outside of the United States as there were willing programs and individuals with high procedural volumes. I am grateful to those who have helped me along the way, notably Sundeep Lakhtakia in India, Mark Topazian in the US and Marc Barthet, Marc Giovannini and especially Laurent Palazzo in France. There is no standardized approach to training late in career and one need to consider programs based more on diagnostic or therapeutic aspects, depending on ultimate goals and philosophic learning approaches.

In addition, I firmly believe there are separate areas of the brain one uses for ERCP and EUS. The mind appears more naturally wired for one or the other. Indeed, I went into gastroenterology only after being exposed to ERCP. Something obviously clicked and made intuitive sense in that direction.

Endoscopic ultrasound training at this stage in life makes sense to me. Assuming my health remains intact I can foresee another 15 years of performing endoscopy. I believe that EUS training will provide me with career longevity and satisfaction as well as providing unique patient care. I am confident that prior extensive experience in interventional procedures will allow me to expand the field of therapeutic echoendoscopy. This, of course, remains to be seen.

Training at this career stage requires commitment to first understanding the foundation of EUS. Obviously, this takes time. Theoretically the learning curve is slightly less steep given past endoscopic experience. However, as mentioned the brain wiring in one direction means rewiring to another. One must also deal with the fact that all prior success must be put aside and accept the pain and frustration of starting at the bottom all over

again. If nothing else, it allows me to be sympathetic to those young endoscopists in fellowship training.

Overall, I took this direction as I have seen the light, or shall I say the echoes — both dark and bright. Can I recommend this approach to endoscopists in a similar situation? The answer is a qualified yes, if one has dedication to training and education and available support system. This includes institutional support and support at home. Be prepared to immerse yourself in ultrasound textbooks, anatomy books (and cadavers, if available), DVDs, simulators (live, *ex-vivo*, virtual, mechanical) and online learning resources. It can be done with time and dedication. Look me up in a few years for an update.

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REFERENCES

1. Baron TH. Drainage of pancreatic fluid collections: Is EUS really necessary? *Gastrointest Endosc* 2007;66:1123-5.
2. Chahal P, Papachristou GI, Baron TH. Endoscopic transmural entry into pancreatic fluid collections using a dedicated aspiration needle without endoscopic ultrasound guidance: Success and complication rates. *Surg Endosc* 2007;21:1726-32.
3. Small AJ, Que FG, Baron TH. Retrograde endoscopic cystgastrostomy for pancreatic pseudocyst drainage after a Prior Roux-en-Y gastric bypass. *Obes Surg* 2009;19:243-6.
4. Adler DG, Pearson RK, Baron TH. Endoscopic drainage of a pancreatic pseudocyst in a symptomatic patient with subtotal gastrectomy and Roux-en-Y anastomosis. *Gastrointest Endosc* 2003;57:787-90.
5. Zielinski MD, Cima RR, Baron TH. Endoscopic transgastric drainage of a postoperative intra-abdominal abscess after colon surgery. *Gastrointest Endosc* 2010;71:880-2.
6. Baron TH. Combined endoscopic transgastric and transpapillary drainage of an infected biloma. *Endoscopy* 2006;38:436.
7. Baron TH, Morgan DE. Endoscopic transrectal drainage of a diverticular abscess. *Gastrointest Endosc* 1997;45:84-7.
8. Coelho-Prabhu N, Levy MJ, Baron TH. Successful transgastric drainage of a large mucinous adenocarcinoma of the stomach for palliation of malignant gastric luminal obstruction. *Gastrointest Endosc* 2009;69:e23-5.
9. Akbar A, Reddy DN, Baron TH. Placement of fully covered self-expandable metal stents to control entry-related bleeding during transmural drainage of pancreatic fluid collections (with video). *Gastrointest Endosc* 2012;76:1060-3.
10. Itoi T, Itokawa F, Kurihara T. Endoscopic ultrasonography-guided gallbladder drainage: Actual technical presentations and review of the literature (with videos). *J Hepatobiliary Pancreat Sci* 2011;18:282-6.
11. de la Serna-Higuera C, Pérez-Miranda M, Gil-Simón P, et al. EUS-guided transenteric gallbladder drainage with a new fistula-forming, lumen-apposing metal stent. *Gastrointest Endosc* 2013;77:303-8.
12. Itoi T, Kasuya K, Sofuni A, et al. Endoscopic ultrasonography-guided pancreatic duct access: Techniques and literature review of pancreatography, transmural drainage and rendezvous techniques. *Dig Endosc* 2013;25:241-52.