

ASRA NEWS

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Regional Anesthesia vs. Acute Pain Medicine: When Both Miss the Mark

Academic medicine grows in complexity on a daily basis so that labels and names carry increasing importance. As people spend less time gaining an understanding of complex questions or concepts, one needs to be precise about the intent and meaning of nomenclature. A concept that has been lost in the debate of acute pain medicine versus regional anesthesia is the point of the name or the label. The label for a service, academic division or fellowship should be an accurate representation of the service or education provided. Regional anesthesia and pain medicine is no different in this regard, and in this edition we have six leaders of our specialty entering the debate surrounding its future title (see page 6).

Semantics and the misunderstanding of the definitions of words or labels occur in every medical specialty and in day-to-day life. In medicine, we create words and descriptions to identify new concepts and new practices of medicine. Individuals often misinterpret these descriptions.

Pain Medicine is a medical subspecialty that crosses departmental borders. The educational track for the practice of Pain Medicine has been defined by the American Council of Graduate Medical Education (ACGME) as a Pain Medicine fellowship following the completion of an ACGME-accredited residency in Anesthesiology, Physical Medicine and Rehabilitation, Neurology and/or Psychiatry. Practitioners of pain medicine (by the ACGME definition) interact with a wide variety of services in the hospital including the Anesthesiology "Pain Service," the cancer pain services, and the hospice service. In an integrated system, there is enough overlap of the physicians involved in the services to facilitate understanding and communication between them. Challenges occur when the service names do not closely approximate the treatments being offered. These challenges are further accentuated when the fellow (and resident) education do not match the taxonomy used to describe the fellowship.

The use of the term "Acute Pain Medicine" has institutional, educational and service problems. First and foremost, acute pain medicine is already a subset of the ACGME Pain Medicine fellowship. Secondly, the term implies that attendings and fellows at the completion of their fellowship will be expert in the management of all patients with acute pain including non-perioperative, cancer and chronic pain patients. This is a very lofty goal for a one-year fellowship. In addition it runs into

regulatory issues with the ACGME. Non-ACGME fellowships are required to avoid detracting from the education of ACGME fellowships, therefore the amount of similarity of practice needs to be limited. This is done for two reasons: 1) it is to ensure sufficient experience for the ACGME fellows, 2) it is ensure that those within the non-ACGME fellowship do not practice medicine outside of their training scope of practice when they complete the fellowship.

The nomenclature of "Regional Anesthesia" is equally insufficient. It undervalues the education and service in institutions where the faculty and fellows are involved in care of patients who have

"An additional obstacle to this educational goal is that these fellowships often involve a portion of the fellow's time as junior faculty supervising intra-operative anesthesia to cover their salary."



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not received regional anesthetics but have pain requiring hospitalization (e.g. acute pancreatitis, new onset pancreatic cancer). The term simply describes a technique not a practice of medicine that sells this noble practice short regardless of the ancillary services provided.

The practice and training for regional anesthesia has evolved over the last two decades to involve a substantial amount of pre and post-operative care. This evolution has revolutionized postoperative pain relief, however neither "acute pain medicine" nor "regional anesthesia" accurately reflect the practice.

The terminology needs to fulfill two requirements:

1. reflect that this is the practice of medicine
2. accurately reflect what service or education is being provided to patients and fellows.

"Regional anesthesia" does not achieve the first requirement but certainly meets the second. "Acute pain medicine" achieves the first but a large proportion

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President's Message

Seeking ASRA Member Input and Participation



Vincent W.S. Chan, M.D., F.R.C.P.C.

ASRA is a non-profit organization run by its volunteer members and financially supported largely by membership dues. ASRA has a long and distinguished history and those interested in history will enjoy reading a detailed account of the birth, growth, dissolution of the original ASRA (*Reg Anesth Pain Med* 2006;31:53-65) and the eventual rebirth of ASRA in 1975 thanks to the vision and ambition of our

5 founding fathers (*Reg Anesth Pain Med* 2006;31:71-78). Active member participation has led to the growth of the society from 300 members in 1975 to a big "family" of approximately 5,000 members today.

My Journey in ASRA

My journey and involvement in this subspecialty society is probably similar to yours. As a resident, I was intrigued by the science and technical challenge of regional anesthesia that only a few of my teachers could master. I vowed to acquire and apply the skills with proficiency so that one day my patients could benefit from regional anesthesia. During my pain fellowship at Brigham and Women's Hospital more than 20 years ago,

"Opportunities abound for members who are interested in forming Special Interest Groups within ASRA. The criteria are outlined in the About Us section of the website."

Dr. Benjamin Covino (Chairman at the time) introduced me to ASRA and encouraged me to join. At the outset, my participation was limited to regular attendance at annual meetings but my affinity and involvement with ASRA grew with time. As I found meaning in the society's mission and developed friendships with other members, I became an active participant. My role changed from being a listener to a presenter in scientific abstract sessions, an instructor in weekend workshops, and later on, a faculty

member at annual meetings. Having demonstrated my commitment to the society, I was invited to contribute to various committees and eventually, to join the Board of Directors. My association with ASRA has benefited me in a number of ways. The Carl Koller research grant, although modest in amount, helped me kick-start a clinical project. My interaction with the past and present leaders, scholars, scientists and administrators of the society has inspired me to set higher goals for my professional and personal life. There is so much to learn from these role models. Through active participation, ASRA has become an important part of my family.

Opportunities for Participation

I hope you too will become an active participant in ASRA. Many people have asked me how they can become more involved with the society; I have listed some examples of opportunities below. Remember that membership is a prerequisite for participation, so please take a moment to renew your membership online before the end of the year.

1. An electronic needs assessment survey will be sent out shortly to gauge your perspectives and satisfaction on the value of the membership, current ASRA educational products, publications and ASRA's services. Your thoughtful response to this 10-min survey is vital to ASRA and will help shape the upcoming strategic plan to develop future educational products and research objectives.
2. Every year, nominations are solicited for the Bonica Award, the Distinguished Service Award, and the Labatt Award, which aim to recognize individuals who have contributed significantly to ASRA and to the practice of regional anesthesia and pain medicine. Your response will help the Nomination Committee to include candidates who are truly the "people's choice."
3. A new annual Resident / Fellow of the Year Award has been established to recognize trainees who have demonstrated outstanding contributions to ASRA, our specialty, the welfare of residents and/or the quality of residency education. A call for nomination will be issued before the end of the year and again your recommendation is essential to the election process.
4. The next round of nomination of candidates to the Research Section Committee is fast approaching. Resident/fellow members who wish to participate in this highly educational 30-member committee are invited to apply soon. Please look out for a call for nomination in the upcoming ASRA Newsletter.

Regional Anesthesia vs. Acute Pain Medicine: When Both Miss the Mark

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of “acute pain medicine” fellowships fall far short of the second. Most “acute pain medicine” programs have ACGME Pain Medicine fellowships side-by-side and therefore the “acute pain medicine” fellows are less likely to experience or be fully trained in management of patients with acute pain issues that are not temporally related to surgery. Furthermore, in busy settings in which the demand for regional analgesic techniques is high, the fellows spend a majority of their time performing nerve blocks rather than learning from acute pain patients on the wards. The fellows either spend the significant time required becoming competent in the management of true acute pain (the broad definition discussed above) or they focus on the regional anesthetic techniques and the management of perioperative pain issues. An additional obstacle to this educational goal is that these fellowships often involve a portion of the fellow’s time as junior faculty supervising intra-operative anesthesia to cover their salary.

The question is then clear. If “regional anesthesia” and “acute pain medicine” are both inappropriate terms, what is a nomenclature that more closely approximates

the goals outlined above? I would suggest delineation outlined in the Miller’s “Basics of Anesthesia, 6th ed.” for inpatient pain services. I propose that the fellowship be named Perioperative Pain Medicine and Regional Anesthesiology (PPMRA). This satisfies the first and second requirement, and avoids the regulatory issues of competing fellowships if they already have an ACGME Pain Medicine fellowship.

Perioperative Pain Medicine reflects the practice of medicine not simply a group of techniques as required by Boezaart, Chelly and Buckenmeier. Regional Anesthesiology more accurately reflects the perioperative nature of this care as discussed by Beathe, Liguori and Neal. It accurately reflects the patient population that is taken care of by the faculty and fellows. Numerous counter-arguments can be raised from exceptions to this trend. However, this term (PPMRA) more closely reflects the reality of practice in the majority of institutions and also the strength of the anesthesiology based peri-operative specialty.

5. Associate Faculty are being sought for the Spring Regional Anesthesia meeting and the Fall Pain Medicine meeting every year. Please contact the Scientific Program Chairs if you are interested in helping out. The 2011 Program Chairs are Dr. Christopher Wu (Spring) and Dr. Gary Brenner (Fall) and the 2012 Program Chairs are Dr. Francis Salinas (Spring) and Dr. Daniel Warren (Fall).
6. The Pain Resource Center on the ASRA website is work in progress. Not only can you comment on the content of the current online educational materials (by clicking on the Feedback button on each respective web page), you can also contribute additional materials by contacting Dr. Honorio Benzon (Chair of the Website Editorial Committee) at hbenzon@nmff.org.
7. Opportunities abound for members who are interested in forming Special Interest Groups within ASRA. The criteria are outlined in the About Us section of the website (<http://asra.com/about-us-special-interest-groups.php>).

8. Submission of your high quality articles to our high impact *Reg Anesth Pain Medicine* journal is always welcome.

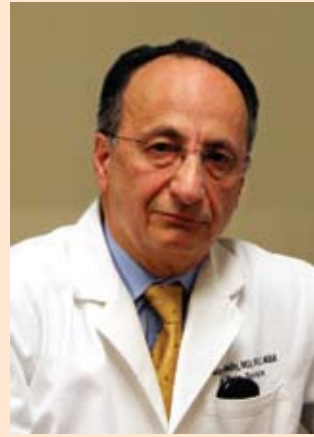
As you can see, you can participate in many ways and your constructive comments to further improve ASRA are always welcome. These can be sent in through the “Feedback Corner” in the Member Only section of the ASRA frontpage, or you can write to me at president@asra.com.



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PRO CON

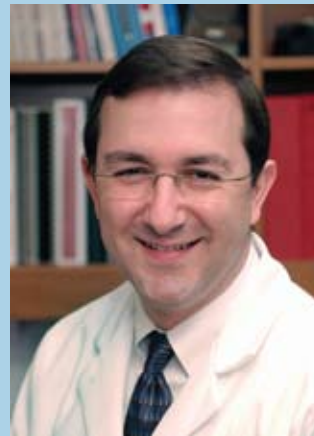
Fellowships in Regional Anesthesia Should Be Renamed



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Programs offering a regional anesthesia (RA) fellowship today practice and teach RA as a part of the discipline of anesthesiology. According to this model, peripheral nerve blocks are placed immediately prior to transferring the patient to the operating room or, as is often the case, in the operating room. These blocks are directed at managing intraoperative pain and/or immediate postoperative pain. For such programs, the designation of “RA fellowship” is correct, and is a perfectly appropriate title that we believe should remain unchanged. However, the authors have serious reservations regarding the designation of RA as a unique subspecialty of anesthesiology, necessarily associated with completion of an “RA fellowship” program, hence the purpose of this debate.

The antiquated arguments of general anesthesia vs. RA no longer enter this debate, because both are now equally safe and user-friendly. The role of RA within the practice of anesthesiology is settled and widely accepted to be extremely valuable. However, similar to other valuable anesthesiology procedures, RA is essentially nothing but a collection of techniques that is on a par with, for example, invasive monitoring or total intravenous anesthesia. It is for this reason that the authors contest the entitlement of these RA postgraduate teaching programs to exist uniquely and independently as opposed to functioning as a *component* of a thoroughly comprehensive anesthesiology residency program. Would not a division of any other

technique of anesthesiology, such as invasive monitoring, for example, or a division of TIVA be considered preposterous? It is, therefore, not surprising that at departmental levels, except where true RA enthusiasts are present, the use of blocks as a mode of anesthesia has not justified the creation of an independent subspecialty group with a dedicated fellowship. To require that a young anesthesiologist invest an entire year to learn how to perform block techniques is excessive, especially for those whose residency training has already provided sufficient opportunities to learn and practice RA techniques. Even for those who may have missed RA training during their residencies, a variety of opportunities are available that teach anesthesiologists the technical aspects of RA (e.g., simulation, workshops, use of mannequins, videos, atlases, etc.). The accessibility of these teaching tools reduces the time required to study and perform RA techniques; consequently, it is not uncommon for RA fellowship programs to try to attract applicants by designing a “fellowship” that is a combination of either a RA and obstetric fellowship or a RA fellowship with “Junior Attending” status. These programs clearly understand that interested applicants instinctively feel that a year of a potentially high-earning career should involve more than simply learning how to perform nerve blocks. To stress

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‘Fellowship in Acute Pain Medicine’

Pro/Con Section Editor:
Richard Brull, M.D.

Life is change. We open this debate with the premise that the “Regional Anesthesia Fellowships” of old have already evolved into the “Regional Anesthesiology and Acute Pain Medicine Fellowships” of today. While debating the exact title of our subspecialty fellowship is an important and entertaining exercise, what we are really doing is formally acknowledging the changing scope and breadth of our practice.

Modern anesthesiology is the practice of perioperative medicine: preoperative optimization, intraoperative management, and postoperative care. A discussion to define fellowship training in our subspecialty must first acknowledge that perioperative medicine is the foundation of our practice. As a profession, we embrace this role as a key component to ensuring that the future of our specialty will continue to yield advancements in anesthetic care. This pursuit inextricably combines art and science, both clinical and academic. Consequently, we contend that *anesthesiology*—the study of anesthesia and anesthetics—more fully encompasses the cognitive aspects of our subspecialty than does *anesthesia*—which

simply describes the loss of the sensation of pain.

In recent years, our ability to extend intraoperative (surgical) conduction block into long-lasting postoperative analgesic blockade has grown exponentially from unimodal neuraxial opioid bolus, to continuous neuraxial and peripheral catheter techniques, to expanded multimodal interventions. Throughout these advances, our goal has been constant: optimizing the perioperative care of each patient using techniques distinctly developed for the management of acute pain, in contradistinction to those often different modalities that focus on chronic pain pathophysiology. With this perspective in mind, it is easy for us to argue

that the most appropriate and defining title for advanced training in our discipline should be *Fellowship in Regional Anesthesiology and Acute Pain Medicine*, a title that retains our heritage of regional techniques, emphasizes the cognitive-and technical-based aspects of the subspecialty, acknowledges our intensified role in the provision of

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“A discussion to define fellowship training in our subspecialty must first acknowledge that perioperative medicine is the foundation of our practice.”

our point, no resident would consider applying to a pediatric fellowship, for example, to become an expert at intubation or placement of intravenous, arterial, and central venous access in neonates and children, nor would any resident apply for a fellowship that teaches invasive monitoring instead of a critical care medicine fellowship – like Acute Pain Medicine (APM), a full-fledged specialty or subspecialty of medicine.

The distinction between RA and APM is clear: the focus of RA is on the technique as an adjunct to anesthesia, which can be performed by anybody providing anesthesia. The focus of “pain management” is the *pain*, which is easy to treat if the patient does not matter. Conversely, the focus of APM is the *patient*, therefore, APM entails a much more complex practice of medicine – clearly the domain of a traditional medical team of physicians working side by side with and supported by a team of well-trained, specialized nurses. Therefore, unlike “RA fellows”, trainees of our APM fellowship programs expertly learn how to:

- treat patients with acute pain from any cause (trauma, cancer, surgery, etc),
- consider which modality to use in managing that pain - multimodal, conductive nerve blocks, NMDA blockade, opioid receptor blockade, combinations of the above, or whatever is appropriate for a specific patient,
- use that information to develop a multidisciplinary strategy to suit the needs of individual patients,
- take ownership of the strategy, procedure or approach, and adapt it daily to the clinical needs of the patient, and follow the patient either in the hospital and/or ambulatory setting,
- supervise the APM team and serve as the institution consultant in acute pain medicine.

We believe that anesthesiologists are in the ideal position to host the emerging subspecialty of APM, and, thus, we find it perfectly acceptable - and practical - for our division of APM, with its fully trained and experienced faculty members, to provide a consulting service to not only care for and treat patients with acute pain on the ICU’s, wards and beyond, but to also provide a full and comprehensive RA service to patients who undergo surgery. In our

daily APM practices at the Universities of Pittsburgh and Florida, and the Walter Reed Army Medical Center and its extensions into the war theaters, we typically place continuous or single-injection nerve blocks when appropriate, and initiate multimodal analgesia or whatever approach is appropriate preoperatively; the anesthesia is managed by another provider in the operating room; and we see the patient again in the recovery room, and treat and follow the patient on the floor or at their homes

through the acute pain phase on a daily or often twice daily basis – often long after the continuous nerve blocks have been discontinued or with extended use of continuous nerve blocks.¹ Acute pain issues are referred directly to our team of dedicated specialists on call 24/7 from obvious sources such

“Moreover, now that it has finally been recognized as an essential adjunct to anesthesiology, we are entering the next battle, namely, restricting the practice of RA to physicians. ”

as anesthesiologists, orthopaedic and trauma surgeons, but also from as far a field as palliative care physicians.¹ The team consists of dedicated anesthesiologists (attending, fellow, and resident physicians) and nurses working exclusively within the field of acute pain medicine and other extenders. Most, if not all, of our anesthesiology colleagues - and certainly all of our surgery colleagues and patients - appreciate this service,² which necessitates a team with advanced training that is typically separate from the intraoperative anesthesia team. The success of this model has elevated APM to the practice of medicine in our institutions and beyond. It is, and should be, strictly the domain of physicians, in which no other groups can or do or attempt to compete.

In conclusion, we believe that naming our subspecialty after a collection of techniques would be fundamentally wrong, and is the reason why RA has struggled to gain recognition as a subspecialty for so many years. Moreover, now that it has finally been recognized as an essential adjunct to anesthesiology, we are entering the next battle, namely, restricting the practice of RA to physicians. This battle cannot and should not be won as long as we, ourselves, give it the same status as any other anesthesia technique. It can only be restricted to physicians if we elevate and hold it up to the practice of medicine and *conduct* it accordingly.

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acute pain medicine, and distinguishes us from those colleagues who focus on chronic and cancer pain.

The inclusion of regional anesthesiology in the fellowship title recognizes that regional techniques used solely for intraoperative management are equally important to those techniques that comprise the intraoperative component of more comprehensive patient management scenarios. We realize that some colleagues focus on postoperative analgesic procedures; we nevertheless argue that the intraoperative use of regional blockade remains a valued component of surgical anesthesia and a bridge to prolonged postoperative analgesia. The intraoperative component of our skill set is essential for anticipating and avoiding those potential challenges and complications that require experience, vigilance, and a context gained from preoperative patient assessment. Local anesthetic toxicity, nerve injury, and incomplete nerve blocks are only a few of the pitfalls faced by the regional anesthesiologist. Moreover, a growing body of evidence suggests that the intraoperative arena contributes to outcome improvement. Consider one of the most common serious perioperative complications: surgical site infection (SSI). The timely observations of Chang and colleagues.¹ emphasize that inclusion of a regional *anesthetic* techniques influences the overall risk of SSI. They report that among patients undergoing total hip or knee replacement, a factor-of-two reduction in SSI is observed when epidural or spinal anesthesia is used rather than general anesthesia.

“Look no further than the titles of our prominent specialty journals: *Regional Anesthesia and Pain Medicine*, or *Anesthesia and Analgesia*. Just as anesthesia and analgesia are deeply intertwined, they are appropriately linked together.”

In summary, we believe it is difficult to reconcile our view with the contrasting perspective that advanced training be defined simply as a *Fellowship in Acute Pain Medicine*. Anesthesiologists are far more than technically adept practitioners delivering local anesthetic adjacent to target nerves. Adequate analgesia is an important — albeit a single and myopic — goal. Any fellowship title that excludes *regional anesthesiology* denies the importance of the foundational elements upon which acute pain practice is built, and the concept that intraoperative management — even on those occasions when it is not continued postoperatively — is of

long-term consequence to our patients. Look no further than the titles of our prominent specialty journals: *Regional Anesthesia and Pain Medicine*, or *Anesthesia and Analgesia*. Just as anesthesia and analgesia are deeply intertwined, they are appropriately linked together.

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2. Treschan TA, Taguchi A, Ali SZ, et al. The effects of epidural and general anesthesia on tissue oxygenation. *Anesth Analg*. 2003; 96:1553-1557.

Profiles in Regional Anesthesia:

Nigel E. Sharrock, M.B.Ch.B.



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When Dr. Nigel Sharrock accepted the position of Director for the Department of Anesthesiology at Hospital for Special Surgery (HSS) in 1986, an orthopedic specialty hospital in New York City, regional anesthesia was employed for less than 15% of all surgical procedures. Today, that ratio has been reversed, and regional anesthesia techniques are administered for approximately 90% of all surgical procedures. Under the leadership of Dr. Sharrock, HSS became one of the first hospitals in the United States to promote the use of regional

anesthesia for orthopedic surgery and pain management.

Dr. Sharrock received his medical degree from Otago Medical School in New Zealand. Following a rotating internship at Wellington Hospital, Dr. Sharrock did his anesthesiology residency at Albert Einstein Hospital in New York. He then joined the Attending Staff at Peter Bent Brigham Hospital/Harvard Medical School. In 1977, he was invited to join the Attending Staff at Lenox Hill Hospital in New York, where he practiced until he assumed the Directorship at Hospital for Special Surgery in 1986. In 1993, the Department structure was re-organized and Dr. Sharrock became the Director of Anesthesia Research and Education, a position he held until 1995. Dr. Sharrock remains on the HSS Staff today as Attending Anesthesiologist and Senior Scientist, as well as Professor of Anesthesiology, Weill Cornell Medical College. Dr. Gregory Liguori, current Director of the Department of Anesthesiology at HSS and Anesthesiologist in Chief, provides these words about Dr. Sharrock: "Dr. Sharrock recruited me to HSS in 1993 with the promise that I would become a part of the most cutting-edge practice of regional anesthesia for orthopedics. 'One of the truly innovative minds in the field of anesthesiology' is how Dr. Leroy Van Dam, our former teacher from Brigham & Women's Hospital, has described Dr. Sharrock. Seventeen years later, 43 anesthesiologists at HSS have performed hundreds of thousands of anesthetics to patients undergoing orthopaedic surgery. Each one of those physicians and each one of those anesthetics can be traced back to the vision of Dr. Sharrock."

When Dr. Sharrock began at HSS, he immediately began to lay the groundwork for his vision of an almost exclusively regional anesthesia practice, believing it to

be the safest and most efficient practice for the patient population. When asked how he accomplished this conversion, he said he had to identify his "customers' concerns and understand their priorities." He knew his customers to be the surgeons, the hospital administrators, nursing and other clinical support staff, his anesthesia colleagues and most importantly, his patients. He sought to address their specific concerns and recruited attending staff from excellent training programs to teach them regional techniques so that they, too, achieved levels of expertise.



In 1986, Dr. Sharrock invited Dr. Jeffrey Ngeow to join the Anesthesiology Staff, and together they started the Chronic Pain Service. This service will mark its 25th year in 2011 and is now responsible for more than 12,000 procedures annually. Five years later, Dr. Sharrock implemented the Acute Pain Service to address the emergent pain management needs of the post-surgical population at HSS. In 2009, more than 11,000 procedures were performed by the HSS Acute Pain Service Team. In the words of Dr. Paul Pellicci, Attending Orthopaedic Surgeon and Clinical Professor of Surgery: "Nigel was my hero, like a knight on a white horse, riding in to bring us into a modern era of anesthesia. No longer did I have to worry about what was happening on the other side of the plastic curtain. His hires were brilliant and intelligent young men and women who were not merely anesthesiologists but true physicians in the finest sense of the word. Come to think of it, Nigel is still my hero."

According to Dr. Thomas Sculco, HSS Surgeon in Chief: "Dr. Nigel Sharrock, who pioneered regional anesthesia for joint replacement and orthopedic surgery, has been singularly responsible for the dramatic improvement in our patient outcomes and the marked decrease we have seen in blood loss and thromboembolic problems." Dr. Sharrock implemented several changes to the anesthetic management of patients including the transition from general to regional anesthesia, increased use of perioperative, invasive, hemodynamic monitoring, extended postoperative surveillance of up to three days or more for patients with

high-risk co-morbidities, and the use of postoperative epidural analgesia based on his own research. Dr. Eduardo Salvati, Attending Orthopaedic Surgeon and Clinical Professor of Surgery, elaborates: *“With his inquisitive mind, and unique organizational and analytical skills, Nigel was able to orchestrate and direct a team of dedicated surgeons, internists and basic scientists to follow a thoughtful line of research which culminated in the elucidation of the main factors resulting in the severity of the intraoperative activation of the clotting cascade. These findings lead to the implementation of prophylactic measures and maneuvers, including the timely and appropriate administration of intraoperative heparin which reduced significantly the incidence of thromboembolism. The results of these studies have had worldwide recognition and the recipient of the coveted Hip Society Award as well as the Henry Christian Memorial Award for Outstanding Research. His 19 Book Chapters and 100 + peer reviewed publications reflect explicitly his monumental work. I reflect on this fruitful and golden period with pride and nostalgia.”*



Dr. Sharrock’s enthusiasm was infectious. On a personal note, I was recruited as a Research Assistant to work on an 8 week study for Dr. Sharrock in the spring of 1988. My plan was to return to teaching in the fall of 1988. I am still at HSS, albeit in a somewhat different role. The reason I stayed at HSS is not complicated. Dr. Sharrock invited me to join his staff on a permanent basis and I wished to continue working with him. While Dr. Sharrock has one of the most brilliant minds I have ever encountered, he has always been approachable, kind, and supportive. He also possesses an excellent sense of humor. For several years, Dr. Sharrock has entertained all of our staff at our annual Graduating Fellows’ Dinner, where he satirizes the departing Fellows. At this same Fellows’ Dinner each year, in recognition of Dr. Sharrock’s contributions to the field of research in regional anesthesia, an award for academic excellence is given in his name to one of the graduating Fellows. Recipients of the “Nigel E. Sharrock Award for Academic Excellence in Regional Anesthesia” have included Dr. Richard Brull, Dr. Michael Ho, Dr. Danielle Ludwin, and Dr. Andrew Cameron. Dr. Sharrock has

been selected as “Teacher of the Year” by the graduating Fellows, as well as the rotating residents more than once. His commitment to learning is a legacy he has passed on to his children. His oldest and youngest daughters, Emily and Penelope, are educators, and his middle daughter, Justine, is a published author.

Dr. Sharrock’s interests extend far beyond the operating room. He, and his wife Juliet, are committed to preserving wildlife in New Zealand and have provided support for naturalistic endeavors in his home country for many years. Dr. Sharrock is also an avid rugby fan and can often be found cheering in a New York City gathering place for the New Zealand “All Blacks” with Dr. Richard King, HSS colleague and fellow New Zealander. Dr. King was also the first Fellow in Regional Anesthesia at Hospital for Special Surgery. It was Dr. Sharrock who also started the Regional Anesthesia Fellowship Program at HSS. To date, over 75 Regional Anesthesia Fellows have trained at HSS.

Today, Dr. Sharrock is still formulating new concepts and implementing studies to improve the practice of regional anesthesia. His present research focuses on the effect of optimal regional analgesia on arterial tone after total hip arthroplasty and cerebral blood flow. Dr. Sharrock’s zeal for learning and his commitment to improving the practice of regional anesthesia for the benefit of his patients remains an inspiration to the entire regional anesthesia community.



In Memoriam: **Albert Van Steenberge**

The world of Regional Anesthesia has lost one of its founding ambassadors, someone who dedicated most of his life to the promotion of regional anesthesia and pain management. Prof. Albert Van Steenberge died peacefully and surrounded by his family at his home on September 23, 2010.

Albert studied medicine at the University of Leuven, Belgium (classmate of Dr. Paul Janssen). Soon after his graduation in 1951, he started his internship at the University Hospital St. Raphaël (Leuven, Belgium), gained experience in thoracic and vascular surgery (Karolinska and Sabbatsberg hospitals, Stockholm, Sweden) and did his residency in the Notre-Dame Hospital in Montréal (Canada) and at the University of Leiden (The Netherlands).

After specializing in anesthesiology & reanimation (1955), Dr. Van Steenberge established the first reanimation centre in Belgium, in the St. Martinus Clinic, Kortrijk. Soon its success led to the organization of anesthesiology departments in seven other Belgian hospitals.

In 1956 and as a front-runner Albert introduced and developed loco-regional anesthesia and epidural analgesia in childbirth.

In 1962 Albert co-founded the Belgian Society of Anesthesia and Reanimation.

He was co-founder and first national president of the Belgian Union of Medical doctors (1963-1965) and worked actively to establish a private hospital based on US models.

In 1965 he undertook a journey to the USA and Canada to establish contact with famous chiefs of departments of anesthesia, such as Professors Ph. Bromage (Montréal), Fr. Moya (Miami), J. Bunker (Palo-Alto) J. Gravenstein (Gainesville Florida), J. Bonica (Seattle Washington), S. Schneider (San Francisco, CA) and N. Greene (Yale New Haven). All became friends of Albert. Later on he sent several of his residents to them in order to raise standards in his own country. He never

stopped sharing experiences and continued developing relationships with overseas colleagues.

For almost 35 years (1966-1990) Albert worked at the St. Anne Clinic in Brussels and kept on developing new techniques such as the low dose epidural and the combined spinal-epidural.

As a member of the Board of the Obstetric Anaesthetists Association (OAA), he organized its first congress on the continent in 1978. A year later, during a US organized meeting in Heidelberg (Germany), Prof. Bonica advised him to set up a similar society as the American Society of Regional Anesthesia (ASRA). Albert did so by creating the European Society of Regional Anesthesia – ESRA (Royal Decree on January 31, 1980). He was the first Secretary-General (1980-1989) and its president from 1993 to 1997.

With the vision of making ESRA a truly European organization, he broadened its scope by initiating contacts and scientific meetings with Eastern Europe from the early '90s on: with Professors E. Mayzner-Zawadska (Warsaw, Poland), F. Constandache / C. Berteanu (Bucharest, Romania), I. Kanus (Minsk, Belarus), J. Nojkov (Skopje, Macedonia), J. Samarütel (Tartu, Estonia) and Paver-Erzen (Ljubljana, Slovenia).

Meanwhile in 1991 he co-founded the European Society of Anesthesiology (ESA) with his colleagues and friends Pierre Viars (Paris, France) and Bruce Scott (Edinburgh, UK).

Albert Van Steenberge received several awards, including the Distinguished Service Award (ASRA) and the

Carl Koller Gold Medal Award (ESRA). The Honorary Albert Van Steenberge annual lecture was initiated in 2004 by the Belgian Association for Regional Anesthesia (BARA).



(July 31, 1925 – September 23, 2010)

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Pain and the Battlefield

Providing medical care during Operation Iraqi Freedom was very rewarding yet challenging at times. A typical week could consist of caring for patients who were injured from helicopter mishaps, incoming mortar and rocket fire, motor vehicle crashes, gunshot injuries, treating acute pain, and chronic pain management for preexisting conditions and postoperative procedures. A mixture of adrenaline, devotion, and training kept me focused during my thirteen-month deployment. What fascinated me the most was caring for those soldiers with chronic pain issues.

My direct medical responsibilities during my deployment involved taking care of the brave men and women who were assigned to the 4-227th Attack Reconnaissance Battalion. This responsibility increased dramatically when I was selected as the brigade flight surgeon for the 1st Air Cavalry Brigade, 1st Cavalry Division. The Air Cavalry Brigade is an aviation brigade that was activated on September 16, 1984. It is composed of a headquarters company, an attack battalion, a general support aviation battalion, and an aviation maintenance battalion. The brigade's mission is succinct: On order to deploy to any theater, execute operations, and redeploy. There is no other way to put it: these individuals work hard and during a deployment for wartime operations they work even harder.

There is a common misconception that the leading cause of hospitalizations and medical evacuations from a combat zone are related to injuries resulting from direct combat. By the Vietnam War, accidents and other non-battle injuries were the primary cause of military personnel debilitation in theater.¹ I encountered numerous soldiers who suffered from chronic pain, which may have been preexisting or exacerbated by the duties of their military occupational specialty.

There are numerous physical demands placed on soldiers during a combat deployment. Routine operational task such as lifting heavy equipment, wearing Kevlar, and prolonged driving can adversely affect one's strength, flexibility, and stamina. This can render an individual susceptible to an acute musculoskeletal injury or chronic pain to the affected area.² As a result of the physical requirements required of them, many clinicians would argue that the military population, especially those who have or are deployed to a combat zone provides the perfect research model to study and implement improvements in the way clinicians practice pain management, not only from a clinical perspective, but also from a financial perspective.

As the ASRA's 2010 Annual Pain Medicine Meeting and Workshops approaches we should ask ourselves, "what can we do to help?" There are numerous ASRA residents and fellows who have served in the military or currently hold active duty or reserve military assignments. Many of us will see patients at our home institutions that have deployed during Operation Iraqi Freedom or Operation Enduring Freedom. As clinicians, we owe these and every individual we treat for chronic pain our highest level of knowledge, skills, and confidence with the understanding that the vast majority of this population group wants to return to duty, for the mission comes first.

Pain is the most frequent reason patients seek physician care in the U.S and the annual cost of chronic pain in the United States is estimated at \$100 billion.³ With the increasing concerns over health care costs and access to care we are challenged more than ever to come up with a solution not only for our soldiers and veterans, but also to society as a whole.

The 2010 Annual Pain Medicine Meeting and Workshops will be an exciting event full of educational opportunities, discussions, and networking venues. It will also provide those moments where these challenges can be discussed, research ideas are seeded, practice paradigms are shifted, and patient care is ultimately improved.

This is our duty and mission.

I look forward to seeing you in Phoenix!

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Artemus Flagg II, M.D., M.P.H.
Chair Elect,
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CA-2 Anesthesiology Resident
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TAP Blocks: Major Advance, or Not a Chance?

Thanks to everyone who submitted letters regarding their opinion on the transversus abdominis plane (TAP) block and its future place in regional anesthesia practice. Clearly the experiences of colleagues around the world are mixed and future results of randomized, controlled studies are keenly awaited to determine the place of this novel technique in adult and pediatric practice. The following correspondence contains important pointers both from practitioners and leaders in the field as to the future direction and use of this technique.

Colin J.L. McCartney M.B.Ch.B., F.R.C.P.C.

Editor, *ASRA News*

Department of Anesthesia, Sunnybrook Health Sciences Centre
University of Toronto

TAP blocks are ideal for controlling the severe pain that follows iliac crest bone grafting. I have done 32 cases, works, very well with no pain most of the time. I published some comments on my first 12 cases as a letter in *Anaesthesia and Intensive Care* (2009).

Regards,

Darcy Price M.D.

North Shore Hospital
Takapuna, Auckland, New Zealand

I have been placing ultrasound guided classic TAP block catheters for pain management of infraumbilical laparotomy incisions and oblique subcostal TAP catheters for supraumbilical laparotomy or subcostal (open cholecystectomy) incisions in my practice here in Lubbock, TX.

I have had excellent results, with patients using minimal PCA narcotics in the first 24 hours, then being transitioned over to PRN dosing. I started out with intermittent boluses every 12 hours (30 ml of 0.25% Bupivacaine with epinephrine in each catheter), but now use a pump and run 8 to 10ml/h of 0.125% Bupivacaine through each catheter.

I feel the benefits of TAP blocks over epidural analgesia are enormous. Being in private practice, there is definitely less time managing the peripheral nerve block catheters than an epidural. There is less monitoring from a nursing standpoint. I don't have to deal with sympathectomy-mediated hypotension. I don't need to worry about heparin dosing and catheter management. Patients easily become ambulatory with no motor weakness. After the first 12 to 24 hours the visceral pain has largely settled and the somatic control with the TAP block is sufficient.

In my opinion, and in my practice, TAP blocks have replaced epidural analgesia. I would likely, except on rare occasions, avoid placing epidurals altogether because of the reasons stated above, and I place TAP blocks as frequently as possible.

Robin C. Minielly, M.D.

Site Director of Anesthesia, Covenant Medical Center
Lubbock, Texas

In our clinic (Rikshospitalet, Oslo, Norway) most colleagues use the blind landmark technique for TAP block. Having read the articles by Dr John McDonnell (Ireland), where US is compared to the landmark method, his results show a shorter effect and only infraumbilical analgesia with US. Furthermore MRI studies using his method suggests a paravertebral component to the block, accounting for its prolonged effect. The subcostal nerve crosses the apex of the Triangle of Petit, and the local anesthetic tracks along the nerve to reach the paravertebral space.

When administering the TAP block we use 25 mm needles for virtually all patients. If the BMI is high we ask an assistant to pull the skin towards the axilla. This way we have been able to administer the block to patients with BMI > 40.

The key to the block is proper identification of the Triangle of Petit and pointing the needle in a slightly anterior direction. If the appropriate fascial "clicks" are not felt the needle should be repositioned.

I personally believe the best way to learn the technique is to administer to block to patients who are having pain, if bad enough the tension of the fascia makes it much easier to feel the "clicks" and in some cases the clicks have been clearly audible (and the patients are most grateful).

Anders Krohg, M.D.

Rikshospitalet
Oslo, Norway

TAP blocks have become an extremely important part of the pain management strategy at the QEII Health Sciences Centre in Nova Scotia. I know of at least two ongoing studies in Halifax which are assessing the efficacy of these blocks which I will discuss later. TAP blocks are now used in all gynecological oncology patients, hemicolectomy, total colectomy, and radical prostatectomy. Essentially epidurals are now reserved for patients presenting for retroperitoneal para-aortic node dissection or young patients with inflammatory bowel disease presenting for bowel resection. Para-vertebral catheters inserted by the surgeon have taken over for thoractomy, retroperitoneal AAA repair, as well as open nephrectomy. Therefore the overall number of epidurals performed at the QEII has dropped dramatically, and there is concern that resident training and maintenance of competency in epidural placement is at risk.

TAP Block was not introduced to Halifax until Dr. Ban Tsui came to visit and did a number of workshops in Dec 2007. Immediately the anesthesiologists became interested in this technique, particularly when the patient

had contraindications to epidural, and they did them under direct US guidance. One of my early successes was in a patient with end stage multiple sclerosis, with severe respiratory muscle weakness coming for a revision ileostomy. I was concerned that if she was intubated under general anesthesia she would never be weaned off the ventilator. An epidural in this patient was also relatively contraindicated due to the immunosuppressant medication she was taking, and the reduction in respiratory effort that could have precipitated respiratory compromise. She had a TAP block done on the side of the revision and had the ileum brought up through an enlarged incision in the abdominal wall, without the use of supplemental local anesthesia and with no sedation!!! The patient was discharged the same day.

It became quickly apparent that there was an issue regarding the timing and sequence of when the block should be done relative to the surgery. If the block is done pre-incision it tended to delay surgery, and the duration of analgesia was reduced after the surgical closure. At our institution the TAP block is performed by the surgeon at the end of surgery prior to suturing the fascia. During the learning process the abdominal wall was scanned by the anesthesiologist post injection to ensure the correct placement between the internal oblique and transversus abdominis muscles. Overall there seems to be a high level of satisfaction with the efficacy of the blocks, and 95% of the time they are performed by the surgeon before closure.

Our first double blind study examined ropivacaine vs saline for bilateral TAP block (performed by the surgeons) for radical prostatectomy. The data has undergone preliminary analysis but the study has yet to be published. Localization of the needle or skill of deposition of the solution was not determined with ultrasound. There appeared to be a great deal of variability in analgesia amongst the patients among those that received ropivacaine, and this has been attributed to variation in surgical technique and accuracy. We are now doing a surgeon specific analysis on the data.

The second study is examining caesarian section comparing ropivacaine vs saline under US guidance by the anesthesiologist. I am not sure about when it is injected-before or after surgery. At any rate the study has yet to be published but certainly the investigators cannot see any obvious difference in any of the patients-ie there does not seem to be an incredibly comfortable versus uncomfortable group. Anecdotally the principle investigator told me that they have had a couple of patients who had inadvertent femoral nerve blocks.

Although there has been widespread acceptance of the TAP block, the preliminary results from our studies seem to be mixed, and this seems to echo your experience. My suspicion, like all interventional techniques, is that the accuracy of local anesthetic placement is crucial. The QEII is a teaching hospital. Many of the blocks are being placed with the POP technique by residents with minimal supervision and no objective measurement of their technique with ultrasound verification. Thus the efficacy of the block is only as good as the accuracy of the operator. When it is done well it works well.

Jennifer Szerb, M.D., F.R.C.P.C.

Dalhousie University

Halifax, Nova Scotia.

I have been following recent TAP block publications with great interest, and I thought the pro/con segment in the recent newsletter did an excellent job of summarizing our current love/hate relationship with the TAP block. I, like many other ultrasound-guided regional anesthesia enthusiasts, have embraced the ultrasound-guided TAP block for what it is--a regional anesthesia modality that may serve as an analgesic adjunct and can be performed safely with few, if any, side effects. However, many questions remain regarding the indications, optimal dosing regimen, and timing of TAP blocks. My personal experience with TAP blocks for strictly lower abdominal wall surgery (eg, inguinal hernia repair) has been good. In contrast, TAP blocks performed for intraabdominal procedures in my hands have yielded mixed results. For example, patients who receive preoperative or intraoperative TAP blocks for laparotomy still complain of pain postoperatively since the visceral component is spared. Although we can argue that the pain possibly would have been worse, patients' perception of pain as binary (ie, either present or not present) prevails. In contrast, my experience performing TAP blocks in the postanesthesia care unit for patients following laparotomy has been generally favorable with relatively-rapid relief of existing pain.

It is my opinion that the TAP block, and TAP catheters, still offer substantial promise in postoperative pain management. Further research is necessary to answer some of the many questions that currently surround this technique.

Ed Mariano, M.D.

Palo Alto, California

Paediatric TAP blocks?

With all new techniques there will be enthusiasts, sceptics and those who are indifferent. It takes time, effort and the 'that's it' moment to swing the latter, much larger group of anaesthetists.

There is currently enthusiasm in paediatric anaesthesia research to develop safe alternatives to central neuraxial blocks which are most commonly performed in the anaesthetised child. TAP blocks represent one such alternative, but the evidence base to support this is thin. TAP blocks may be of value in children with spinal malformations, but these are relatively infrequent in the non-specialist paediatric setting.

There is a wealth of evidence regarding the safety and efficacy of epidurals, caudals and increasingly ultrasound guided peripheral nerve blocks in paediatric practice. We are responsible for teaching safe and effective ways to provide good analgesia to residents who may spend limited time in paediatric training. It is perhaps a very conservative approach, but until we have sufficient

Continued: TAP Blocks: Major Advance, or Not a Chance?

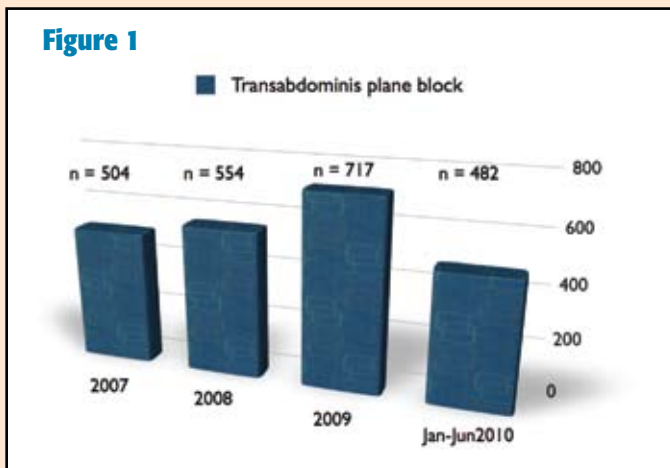
equivalent evidence that TAP blocks are equal or better than the existing regional anaesthesia methods in children they do not have a role to play in paediatric anaesthesia.

It is up to the enthusiasts to provide evidence of their safety and efficacy; a task that should be possible to be achieved within 5 years. Until then a limited number of absolute indications and applications for TAP blocks in children remain to offer an alternative way for excellent analgesia.

As for us, we are neutrals and will probably remain such for the foreseeable future.

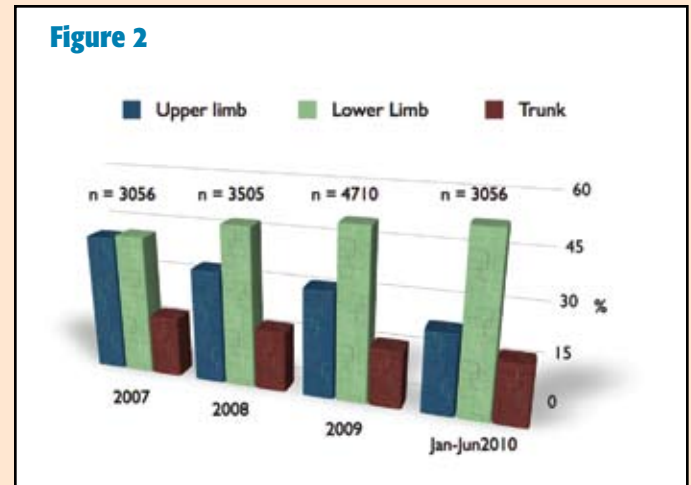
Thomas Engelhardt, Ph.D., F.R.C.A.
Graham Wilson, F.R.C.A.
Aberdeen, Scotland

All new invasive procedures should be thoroughly assessed for their quality and safety and transabdominis plane block (TAP) is no exception. We compared the sensory blockade of posterior and subcostal TAP block and assessed the overall analgesic effectiveness of TAP block following abdominal surgery.¹ Sensory blockade with posterior and subcostal approaches involved three (most cephalad, T10) and four dermatomes (most cephalad, T8) respectively. Patients who received TAP block in this observational study required 40.8 mg (17 – 50) [median (interquartile range)] in the first 24 hours. Many of the patients had surgery for inflammatory bowel disease and would have been challenging to manage regardless of the analgesia technique utilized.



The Australian and New Zealand Registry of Regional Anaesthesia (AURORA) records information on TAP blockade.² Figure 1 shows the number of TAP blocks recorded with AURORA over the period 2007 to June 2010. There has been a steady growth in TAP blockade with a total of 2257 blocks performed during this period. Figure 2 displays the surgical types for which TAP block was used with 52% used for major open surgery. Ultrasound-guidance was utilized in 97% of TAP blocks during this

period. Out of 2257 patients, 926 (41%) required analgesia in the Post Anesthesia Care Unit (PACU) compared to 19% of the remainder of the database cohort (not receiving TAP blockade) during the same time period. The worst pain score (0-10) in PACU was 3(0 – 7) and of the patients not requiring analgesia, the duration of analgesia was 10 (4 – 20) hours [median (interquartile range)]. A closer look at the data from our own hospital indicates that almost all patients requiring PACU analgesia required IV opioids. Only 141 (7%) of patients had continuous blockade and clearly this is a factor that should be considered when assessing the effectiveness of TAP blockade. There were no major complications recorded for TAP blockade from these 2257 blocks.



I would agree with the editor's comments regarding *creative destruction* of existing processes by new applications (ASRA newsletter, August 2010). Related to this is the likelihood that real improvements in patient outcomes can be achieved by the appropriate use of existing evidence-based therapies. Postoperative epidural analgesia has undisputed efficacy including superior analgesia, reduced pulmonary morbidity and postoperative ileus. Arguably, neuraxial blockade has been subjected to the more intense scrutiny regarding serious complications than most anesthesia procedures. Nationwide studies³ and large administrative databases⁴ demonstrate that serious complications of neuraxial blockade are extremely rare. This cohort of 2257 TAP blocks indicate that major complications are likely to be infrequent. Despite uncertainty regarding the efficacy of TAP blockade we should encourage the innovation and creativity behind its rapid development, while recognizing that we have a responsibility to report outcomes objectively using all tools of evidenced-based medicine.

In summary, TAP blocks have become popular for major abdominal surgery as evidenced by AURORA's results. To improve the effectiveness of TAP block a sound anatomical knowledge is required and the approach needs to be matched to the surgery. Hydrodissection with dilute local anesthetic is probably important to increase the number of thoracolumbar nerves involved and a catheter technique is important in many instances.⁵

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Michael Barrington, M.D.
Melbourne, Australia

The position of Transversus Abdominis Plane block in Modern Practice

The contention that arises in the May edition of your newsletter, that the TAP block will replace epidural based analgesia for abdominal is incorrect. It has to be realised that epidural based analgesia remains the gold standard. What is also important to remember is that not all patients presenting for abdominal surgery will be suitable nor amenable to the current gold standard. Nor is it appropriate to use this approach for all surgical procedures that take place on the anterior abdominal wall. In this setting, a reliable alternative should be available to the practicing anesthesiologist. The TAP block is just one possible approach that can be used in this setting. The use of the TAP block decreases the reliance on opioid based analgesia when used in a multi-modal context.

The original work published on the block, by our group, demonstrated in randomized controlled trials that the double pop technique using the lumbar triangle of Petit as the entry point reliably resulted in placement of the needle tip within the transversus abdominis plane and reliably provided analgesia for the anterior abdominal wall above and below the level of the umbilicus.^{1,4} Like most interest groups, regional anesthesiologists have tried, unsuccessfully till now, to replicate the analgesic efficacy of the landmark based approach through the use of ultrasound. The use of ultrasound seemed initially to be logical, the premise that under direct vision a needle should be more safely and possibly more easily placed in the transversus abdominis plane and as such should result in similar analgesia windows as those achieved with the landmark based approach.

Unfortunately this is not the case and we now know that not all TAP blocks are equal, neither in terms of extent of analgesia nor in terms of duration of action. The problem is that most practitioners of the block believe the site of action of the block is exclusively within the transversus abdominis plane and this is quite frankly not the case. What we understand with the current ultrasound approaches (either subcostally or mid-axillary) is that the local anesthetic solution introduced into the transversus abdominis plane remains within this plane providing a localized field effect.^{5,6} Whilst the landmark-based

approach also performs like the mid-axillary based approach in its limited field-like effect, vitally the local anesthetic solution spreads supero-medially and has far greater analgesic effects by its ability to spread throughout the paravertebral space.⁷ This data is currently under peer review awaiting publication and not dependent on anecdotal case reporting.

We also now know, that the success of the original block relies both on the point of needle insertion through the apex of the lumbar triangle of Petit and the final position of this needle in the postero-lateral abdominal wall. With this in mind and in conjunction with our colleague Dr. R. Blanco who first described this approach, we now know that in order to achieve successful blockade with ultrasound the needle tip needs to be placed anterior to the internal oblique muscle at its junction with the quadratus lumborum muscle. At this point the needle tip is posterior to the fascia transversalis and injection at this point allows for more direct spread of local anesthetic solution to the paravertebral space.

The analgesic efficacy of paravertebral blocks has been well described within medical literature. The literature also supports the contention that paravertebral analgesia might replace epidural analgesia in terms of thoracic surgery and in time this might be also true for abdominal surgery.^{8,9} The question thus remains, if the main site of action is the paravertebral space why not just perform a paravertebral block? However, the paravertebral approach, while attractive, has a known and feared side effect profile that often dissuades us from performing these blocks in clinical practice. The introduction of ultrasound might just cause a resurgence in the practice of this block.

Without a doubt the take home message has to be that the landmark based approach works, is reliable and relatively easy to perform. The introduction of ultrasound has complicated a simple block and lead to confusion as to how to perform the block while still achieving equivalent analgesia. This block is the subject of a large body of ongoing important clinical research work and will continue to evoke much comment and review.

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Block Nurses: Coming Soon to a Preop Near You!



Emily G. DeBusk, RN
Perioperative Services,
Team Lead Block Nurse
Duke University Medical Center
Member, ASRA Communications
Committee

"The Block Nursing Program is the single most important addition to our department's regional anesthesia division in the five years since I started working at Duke."

*—Brandon Winchester,
Duke Anesthesiologist*

My name is Emily DeBusk, and I am the team lead block nurse at Duke University Hospital, and author of our block nurse curriculum. In recent months while presenting and discussing the concept of Block Nursing at various national meetings, audiences often ask what made us realize the need

for a specialty nurse in regional anesthesia. As a former PACU nurse, I remember my orthopedic surgery patients in the recovery room and recall the distinct difference between the patients who had a peripheral nerve block and those who did not. The level of patient's comfort, quantity of narcotics consumed, length of PACU stay, and the timeliness in which the patient was able to see family and be discharged are all factors that made me wish that every patient I recovered had a block in place. This inspired me to investigate why some patients receive blocks and some do not. Occasionally, the rationale for avoiding a nerve block appears sound, such as the desire to avoid masking symptoms of compartment syndrome in a tibial fracture, or the unwillingness to risk a "double-crush" nerve injury in a patient with severe baseline neuropathy. Often, however, patients are not offered nerve blocks for other reasons. The surgeon might not be willing to delay the operating room or the anesthesiologist might not feel like they have the necessary level of staff support to facilitate an efficient regional anesthesia practice. The more doctors and nurses I spoke with across the country, the clearer it became to me that a specialized block nurse could positively impact patient care. In this article, I will outline the pre-procedural, procedural, and post-procedural role of a block nurse at our institution, and highlight the early benefits we have seen since initiating our block nurse program six months ago.

"A block nurse serves as the key education coordinator for such discussions, including how to manage and ultimately remove the catheter dressing, signs and symptoms of local anesthesia toxicity and infection, and cautions such as falling asleep on the numb arm or trying to walk unassisted on the numb leg."

Pre-procedure: Teeing Up Success

"In my ideal regional anesthesia universe, I walk up to the bedside of a patient having a block and everything is ready. Our block nurses have made this happen....now all is well in my universe."

—Josh Dooley, Duke Anesthesiologist

At Duke the block nurse program was developed with three objectives: to increase patient safety; to improve patient satisfaction; and to enhance perioperative efficiency. The fulfillment of these objectives begins the minute a surgical patient walks into the preoperative holding area. Block nurses not only complete the standard assessment, but also address specific issues related to regional anesthesia. Block nurses follow orders for STAT labs; document and discuss the patient's pain issues including VAS pain scores and baseline analgesic requirements; initiate a regional and multimodal analgesia plan; place an IV; and ensure that all necessary block prerequisites are completed such as procedural consents and site markings. And when these traditional preoperative nurse tasks are completed, the block nurse's role has only begun. It is often very difficult during a busy clinical day for anesthesiologists

to give extensive education to patients about their nerve block, in particular for continuous ambulatory catheters. A block nurse serves as the key education coordinator for such discussions, including how to manage and ultimately remove the catheter dressing, signs and symptoms of local anesthesia toxicity

and infection, and cautions such as falling asleep on the numb arm or trying to walk unassisted on the numb leg. Improved efficacy in such discussions can mean the difference between an uneventful postoperative course and an unanticipated return to the ER after a fall.



Procedure:

Focus on the Block, the Block Nurse Has Got Your Back

“Historically, the time from the beginning of a block to the end is a critical period where a patient is subject to many possible threats, including but not limited to wrong-sided blocks; respiratory depression and obstruction; and local anesthesia toxicity. Clinical vigilance during this period is imperative.”

—Gavin Martin, Duke Anesthesiologist

During the nerve block procedure, the block nurse serves a key role in the safety of the patient. We initiate the mandatory time out to confirm the patient identification; the surgery and block site and side are correct; the history and physical are signed by the surgeon within twenty-four hours; the anesthesia and surgery consents are signed, dated, and correct, and that all clinicians are in agreement. In the meantime, the patient’s block nurse has already helped with much of the patient education, assembled the supplies, set up the room, and positioned the patient. During the procedure, it is important for the anesthesiologist to focus on the block to ensure safe placement and effective instruction of trainees. This focus is facilitated by the fact that the block nurse remains the eyes and ears in the room, closely monitoring for signs of symptoms of hemodynamic or respiratory instability, and ensuring that a patient remains comfortable, especially during the most stimulating portions of the procedure. Additionally, we vigilantly electronically chart medications given, block note details, and any additional findings during the procedure.

Post-procedure:

Completing the Nerve Block Circle of Life

“Once the block goes in, our work is not done. We still have to ensure that we do more good than harm. Patients might go home and fall and break their leg. They might not realize that the ringing in their ears is not the doorbell. We have an enormous responsibility that extends well beyond the walls of the regional anesthesia procedure suite.”

—Stuart Grant, Duke Anesthesiologist

The post-procedural checklist of a Duke block nurse is a critical component in transitioning a patient’s care to PACU, to floor, and ultimately to home. We check on each patient in the recovery room to ensure the quality of their block, and monitor for signs of block-related complications. For continuous catheters, we personally call the acute pain service to give a complete sign out about the patient and details about the catheter they received. We confirm the appropriate dosing regimen is delivering via the continuous catheter pumps, and for ambulatory catheters we deliver discharge instructions to patients and their families. Essentially, the job of the regional anesthesia team begins when a patient arrives to the hospital, and continues until the complete resolution of the nerve block. And our block nurses embrace this comprehensive patient centric mission.



By the time the anesthesiologist arrives, all supplies are at the bedside, the patient is positioned, monitored, drugs are in line, and the block nurses are ready to perform a standardized “time out.” Our goal is for there to never be another wrong-sided block at our institution, and our block nurse team is playing an integral role in this patient safety initiative.

—Ellen Flanagan, Duke Anesthesiologist

Summary

In this article I summarized the pre-procedural, procedural, and post-procedural role of a block nurse at my institution. Reflecting on the innovative role a block nurse now plays in our regional anesthesia care, I realize that it has allowed more patients to receive peripheral nerve blocks, and that our OR efficiency and block safety have improved. In the six months since the institution of the block nurse program, our on-time OR arrival statistics have improved by approximately 50% vs. the previous six month historic controls. And after two wrong-sided nerve blocks the previous six months, there have been zero since the block nurse program officially began. Beyond block utilization, efficiency and safety, however, I have realized that our block nurses are accomplishing even more. They are a true liaison for the patient, facilitating effective collaboration between every member of the perioperative team. Not only has this resulted in the optimization of patient satisfaction, but in nurse and physician job satisfaction, as well.

“The block nurse program is a dream come true. I fear that one day I will wake up and come to work and the block nurses will have only been a part of my imagination.”

—Jennifer Fortney, Duke Anesthesiologist

Duke has a formal block nurse curriculum pending publication and a visiting block nurse preceptorship. If you would like to hear more details about these educational opportunities, please contact me at: blocknursing@gmail.com

TAP Blocks: Major Advance, or Not a Chance?

Continued from page 17

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As experience with the TAP block increases, we will inevitably gain a better understanding of its most useful applications. Inguinal area surgery is one example where the TAP block (mid axillary line) has been used, but may not be the best choice: it may provide superior analgesia compared with placebo, but a more appropriate technique is the conventional “ilioinguinal” block (at the anterior superior iliac spine (ASIS)).^{1,2} This is because of the significant anteroposterior variability in the penetration of the transversus abdominis muscle by the ilioinguinal nerve and that this nerve often does not travel with the iliohypogastric nerve until very close to the ASIS. The genitofemoral nerve is also more likely to be blocked when local anesthetic is placed at the level of the ASIS.

Importantly for both techniques, complete anaesthesia/analgesia for inguinal hernia surgery is unlikely with either approach because the external oblique muscle (and its aponeurosis) is innervated by the lateral “cutaneous” branches of the abdominal nerves (which arise posteriorly).

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In Memoriam:
Albert Van Steenberge

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He was awarded professorship in anesthesiology by the University of Leuven, Belgium.

Albert Van Steenberge was a true chairman, clinical researcher and a fantastic tutor. He trained numerous anesthesiologists (250) and his scientific output is enviable. His first book 'Epidural anesthesia' was published already in 1969.

Albert was very much loved and a charming person. Together with his life-long friend Bruce Scott, Albert was always open for a joke.

His wife Françoise was always there to assist Albert in every of his endeavors. She was the perfect hostess for many colleagues who were invited to stay at their house in Overijse.

Albert Van Steenberge devoted his entire career to the practice, teaching and the promotion of regional anesthesia, made a remarkable contribution to the profession by improving and teaching new techniques. The work of pioneers like Albert contributed hugely to the increasing popularity of regional anesthesia in Europe.

With the passing away of Albert, ESRA has lost its first three presidents, Bruce Scott (1925-1998) and Hans Nolte (1929-1998).

The world of regional anesthesia grieves the loss of one of its founders. Albert is survived by his beloved wife Françoise, their children Pierre, Martine and André and their grandchildren.

Albert will be remembered as a wonderful friend, a true gentleman, a talented regional anesthesiologist, a great organizer and a visionary. His memory will live on through his accomplishments and the friends and people whose lives he touched.

A memorial funeral was held on Thursday September 30, 2010: 1400 hrs at the St. Dominicus Church, Baron d'Huart lane, 1950 Kraainem (near Zaventem) Belgium, followed by the entombment at the cemetery Jezus Eik, Reebokweg, Overijse (Belgium).

Condolences (free of charge): go to website:
www.veiller.be/rouwbeklag/rouwbeklag.php?id=199

On behalf of the entire former and current Boards of the European Society of Regional Anesthesia and Pain Therapy, and all its members.

André van Zundert, former Secretary-General and President ESRA
Narinder Rawal, former Secretary-General ESRA
Marc van de Velde, President ESRA
José de Andrés, Secretary-General ESRA
Harald Rettig, Treasurer ESRA