Letter to the Editor

Correcting the Nomenclature of Medial Branch Neurotomy to Medial Branch Coagulation

Patrick H. Waring, MD,* Milton H. Landers, DO, PhD,† and Nikolai Bogduk, MD, PhD‡

*Pain Intervention Center, Metairie, Louisiana, USA; †Kansas Spine Institute, Wichita, Kansas, USA; ‡The University of Newcastle, Newcastle, South Wales, Australia

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Dear Editor,

Cervical medial branch radiofrequency neurotomy and its lumbar counterpart are established, effective treatments for neck pain and back pain mediated by medial branches of the dorsal rami [1, 2]. Although the Spine Intervention Society refers to the procedure as a “medial branch radiofrequency neurotomy” [3], others use terms such as “rhizotomy” or “ablation” [4]. However, all these names are wrong.

The term “neurotomy” is erroneous for two reasons. Foremost, the suffix “otomy” means surgical incision of a structure (typically to “open” it) as in “laparotomy or craniotomy” [5], but in medial branch neurotomy the nerve is neither incised nor opened. Also, the prefix “neuro” means “nerve,” but the term “medial branch” already denotes a nerve. So, medial branch neurotomy literally means “nerve nerve cutting,” which is redundant. “Rhizotomy” originates from the Greek “rhiz” which means “root,” but no nerve root is the target for this procedure, and no nerve root is surgically incised or opened [5, 6]. Therefore, “rhizotomy” is a misnomer on both counts. “Ablation” indicates the complete removal or extinction of a specific tissue such as endometrium or cardiac conductive tissue [6]. Upon hearing this name, patients might be led to believe that, because the nerve is gone, their pain cannot return, yet the opposite is the case. The nerve that is treated is only coagulated; it can regenerate, and pain can be expected to return. So, the term radiofrequency “ablation” is not an accurate description of the procedure.

Fortunately, there is another term—“radiofrequency coagulation”—that describes the objective of the procedure. “Coagulation” indicates that heat is used to “convert a fluid or a substance in solution into a gel” [5]. Therefore, the nerve is not destroyed, removed, or eradicated by exposure to radiofrequency energy; it is only incapacitated and retains the ability to regenerate over many months.

Insistence on proper procedural names is not pedantry but the hallmark of professionalism. Our patients and others should expect that we will be as precise in our nomenclature as we are in the performance of the procedure itself.

We hope that the Spine Intervention Society might choose to refer to “radiofrequency neurotomy” as “radiofrequency coagulation” in future publications, and that all physicians who use these procedures will follow suit.

References

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Dear Editor,

Total knee arthroplasty (TKA) is an effective and frequently performed surgery for knee osteoarthritis (OA). By 2030, 3 million annual surgeries are projected in the United States alone [1]. However, nearly 20% of patients report continued pain and dissatisfaction after TKA, which will equate to about 600,000 patients annually by 2030 based upon TKA projections [2]. Genicular nerve radiofrequency ablation (RFA) has recently emerged as a treatment option for native knee OA and for patients with persistent post-TKA pain with limited therapeutic options [3, 4].

Genicular RFA decreases nociception through thermal coagulation of terminal articular branches of nerves that innervate the anteromedial and anterolateral joint capsule of the knee [5]. Although rare, third degree skin burn, hemarthrosis, septic arthritis, and pes anserine tendon injury have all been reported as complications associated with genicular nerve RFA [6, 7]. There has also been a case report of a periprosthetic joint infection (PJI) following genicular RFA for post-TKA pain [8]. Although genicular RFA appears relatively safe, other causes of post-TKA pain must be evaluated prior to considering this treatment, as genicular nerve RFA does not address potentially curative or modifiable etiologies of post-TKA pain. In the following letter, we briefly describe these etiologies, related diagnostic considerations, and encourage the pain medicine and musculoskeletal community to remain attentive to these conditions before offering genicular nerve RFA for the treatment of post-TKA pain.

The differential diagnosis of post-TKA pain can be organized into those either intrinsic or extrinsic to the knee. Relatively common intrinsic causes of post-TKA pain include infection, aseptic loosening, component overhang or malalignment, ligamentous instability, patella-generated pain, such as maltracking or patellar clunk syndrome (painful “clunks” from fibrous tissue at the patellofemoral articulation), loose bodies, polyethylene wear (prosthetic surface wear), arthrofibrosis, trunionosis (corrosion and wear of the junctions in a modular