Practicing emerging therapeutic interventions without proper knowledge: A growing concern among physical therapists

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Sir,

Clinical practice should be based on the latest credible evidence and guidelines. At the same time, hands-on experience is essential for dealing with daily challenges, even if it's not explicitly mentioned in research. While research-based knowledge is valuable, it may not always provide immediate solutions for practical situations.(1)

Emerging techniques refer to innovative approaches for managing pain and treating various musculoskeletal conditions, such as dry needling and extracorporeal shock wave therapy. Dry needling employs thin, needle-like tools to stimulate specific points in muscles, connective tissue, and fascia, aiming to alleviate pain and enhance movement. However, it carries various risks, ranging in severity from mild to severe adverse events. Mild adverse events, occurring at a frequency of 1-10%, include bruising, bleeding, nausea, pain, fatigue, temporary worsening of symptoms, and dizziness. Moderate adverse events (frequency: 0.1-1%) encompass prolonged pain, nerve injury, headache, vomiting, forgotten needles, extreme fatigue, and seizures. Severe adverse events (frequency: 0.1-1%) involve pneumothorax/haemothorax, infection, broken needles, and cardiac tamponade. Reports indicate that 36.7% of dry needling treatments result in minor potential negative events namely bruising (7.7%), pain (5.9%) and bleeding (16%) being most common.(2) Serious adverse effects may include prolonged symptom worsening, fainting, forgotten needles in the skin, flu-like symptoms, infections, excessive bleeding, and weakness or numbness in the legs.(3) Another emerging therapeutic intervention widely used by physiotherapists is extracorporeal shock wave therapy (ESWT), a non-invasive treatment for musculoskeletal disorders. ESWT utilizes mechanical energy to induce changes in cellular structures, triggering reactions in cell components such as mitochondria, endoplasmic reticulum, and intracellular vesicles. This enzymatic response enhances the healing process.(4) Potential risks and side effects of extracorporeal shockwave therapy include local effects hematoma formation, pain at applicator site, skin bruising, skin erythema, nerve irritation with numbness or tingling and superficial edema and systemic effects migraine and headache.(5)

In conclusion, we emphasize on the critical need for evidence-based clinical knowledge when employing emerging therapies like dry needling and shock wave therapy. While these techniques offer potential benefits for musculoskeletal issues, they also pose significant risks and potential side effects. The overarching concern among physical therapists revolves around the application of these therapies without proper knowledge, underscoring the necessity for comprehensive education and expertise to ensure safe and effective use in clinical settings.

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References:


