Flex Therapist CEUs

Plantar Fasciitis and Electrical Dry Needling

1. PF is characterized by intense sharp pain over the medial plantar heel with initial steps:

A. In the morning
B. After walking around for a period of time
C. After a period of standing
D. If getting out of bed during the night

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2. PF pain is present after inactivity.

A. True
B. False

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3. PF pain decreases with prolonged weight-bearing activities.

A. True
B. False

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4. PF has been categorized as an attachment dysfunction of ligament or tendon to bone, with the enthesis being the interface between the periosteum and plantar aponeurosis and/or the tendon of the flexor digitorum brevis.

A. True
B. False

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5. The American Physical Therapy Association clinical practice guidelines recommend ultrasound therapy for PF.

A. True
B. False

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6. For cases of persistent PF, corticosteroid injections are useful for managing _____ symptoms.

A. Long-term
B. Short-term
C. Both long-term and short-term

D. Neither long-term nor short-term

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7. Steroid injections have been linked with:

A. Plantar fat pad atrophy
B. Calcaneal osteomyelitis
C. Plantar fascia weakening and rupture
D. Steroid injections have been linked with plantar fat pad atrophy, calcaneal osteomyelitis, and plantar fascia weakening and rupture

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8. A recent meta-analysis of seven trials concluded that trigger point dry needling is effective in patients with PF with a pooled estimate effect size of _____ points for pain reduction.

A. -5.5
B. -10.0
C. -15.5
D. -20.0

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9. Needling therapy refers to the insertion of thin monofilament needles, which may or may not use injectate.

A. True
B. False

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10. For the primary outcome of first-step morning pain, between-group effect sizes were large at _____ in favor of the dry needling group.

A. 2 weeks
B. 4 weeks
C. 3 months
D. 6 months

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11. The numbers needed to treat suggests that for every _____ patients treated with electrical dry needling, rather than manual therapy, exercise, and ultrasound alone, one additional patient with PF achieves clinically important reductions in first-step pain and related-disability at 3 months.

A. 2
B. 3
C. 4
D. 5

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12. For which of the following electroacupuncture treatment conditions targeting the most tender points over the medial plantar aspect of the calcaneus was there a reported 69% reduction in foot pain and an 80% success rate for patients with chronic PF?

A. 8 sessions over 4 weeks with 1 to 4 needles left in place for 40 minutes
B. 10 sessions over 5 weeks with 2 to 6 needles left in place for 30 minutes
C. 12 sessions over 6 weeks with 4 to 6 needles left in place for 20 minutes
D. 14 sessions over 8 weeks with 4 to 8 needles left in place for 10 minutes

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13. A recent randomized controlled trial of patients with PF reported statistically significant differences in first-step pain and foot pain in favor of intra-muscular trigger point dry needling over sham dry needling.

A. True
B. False

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14. The distal attachment of the plantar aponeurosis at the medial tubercle of the calcaneus is most often reported by patients as the origin of symptoms and the site of greatest discomfort.

A. True
B. False

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15. Periosteal “pecking” or “peppering,” is intended to:

A. Stimulate microtrauma and local inflammation.
B. Augment the fibroblastic reparative process.
C. Increase the concentration and reorganization of collagen fibers.
D. Periosteal “pecking” or “peppering,” is intended to stimulate microtrauma and local inflammation, augment the fibroblastic reparative process, increase the concentration and reorganization of collagen fibers, and mediate the proliferative and remodeling phase of healing at the interface between the periosteum and plantar aponeurosis.

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16. Peppering resulted in significantly greater reductions in pain secondary to PF than corticosteroid injection alone.

A. True
B. False

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17. Miniscalpel-needle release over the most painful tender point at the medial calcaneal tubercle was superior to steroid injections in the _____ for improving first step morning pain in patients with chronic recalcitrant PF.

A. Short-term
B. Long-term
C. Short-term and long-term
D. Miniscalpel-needle release was not superior to steroid injections

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18. A number of studies have demonstrated that _____ leads to greater improvements in pain and disability for the management of osteoarthritis of the knee and/or hip.

A. Periosteal needling
B. Superficial needling
C. Both periosteal and superficial needling lead to equal improvements in pain and disability
D. Neither periosteal nor superficial needling lead to improvements in pain and disability

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19. A recent study found ultrasound-guided pulsed-radio frequency energy of the _____ to be a useful strategy for improving the pain and tissue thickness secondary to PF.

A. Medial plantar nerve
B. Lateral planter nerve
C. Anterior tibial nerve
D. Posterior tibial nerve

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20. Electrical dry needling has been found to cause the release of _____ predominantly from non-neural structures, facilitating a negative feedback loop to neural and neuroactive components of the target tissue.

A. Substance-P
B. CGRG
C. Both substance-P and CGRG
D. Neither substance-P nor CGRG

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21. Mechanical and electric needle stimulation close to the periosteum of bone may be particularly advantageous, as acupuncture has been shown to reduce _____ mRNA expression in bone marrow, thereby limiting inflammation, and inhibiting myelogenic osteoclast activity driving degeneration.

A. TNF-alpha
B. IL-6
C. Substance-P

D. CGRG