

Commentary

Treatment options of lymphangioma circumscriptum

Sir,

The article by Ayse Serap Karadag, Emin Ozlu, Seyma Özkanlı, Tugba Kevser Uzuncakmak, Necmettin Akdeniz^[1] is interesting. Lymphangiomas are uncommon, hamartomatous malformations of the lymphatic system that involve the skin and subcutaneous tissues.^[2] These lesions are divided into two major groups based on the depth and the size of these abnormal lymph vessels. The group with superficial vesicles is called lymphangioma circumscriptum (LC), and the deep-seated group includes cavernous lymphangioma and cystic hygroma. Various modalities include surgical

excision, laser therapy, sclerotherapy, electrocoagulation, and cryosurgery.

Carbon dioxide laser vaporizes the underlying tissues and seals the lymphatic channels.^[3] If the laser energy does not penetrate deep enough into the dermis and/or subcutaneous tissue, the patient will only achieve shortterm palliative symptomatic relief and will have lesion recurrence. Furthermore, energy delivered into deeper structures requires large amounts of local anesthesia (injection or tumescent) because of pain during delivery and may be followed by prolonged healing times with the potential for scarring, prolonged erythema, or postinflammatory hyperpigmentation. Pulsed dye laser (PDL) emits highenergy laser light in ultrashort pulse durations, allowing for specific targeting of the chromophore hemoglobin (585–595 nm) in and around vessels without damaging the surrounding tissues.^[4] The effectiveness of PDL in the treatment of LC can be limited by the minimal hemoglobin as a chromophore, because the dilated

lymphatic channels contain serosanguineous fluid in dilated lymphatic channels.

Sclerotherapy involves injecting detergent sclerosants, chemical irritants, or hyperosmolar agents into the lymphatic malformations to destroy the aberrant vessels. Injectable corticosteroids, tetracycline, 50% dextrose solution, and hyperosmolar saline have all been used in case reports and preliminary trials.^[6,6] For sclerotherapy, intralesional injection of 1% sodium tetradecyl sulfate is used with a very good result. Sclerotherapy using sodium tetradecyl sulfate can be considered a successful minimally invasive treatment option for LC. Depending on the study, recurrence rates vary from 58% to 100%. Cryotherapy utilizes very low temperatures to cause immediate vasoconstriction followed by reactive vasodilation, in turn producing cellular necrosis and healing by secondary intention. Recently, imiquimod cream has been used successfully. Imiquimod induces cellular production of endogenous interferons and interleukins.^[7] Efficacy in these patients is likely related to the ability to inhibit vessel formation and induce endothelial cell apoptosis.

Surgical excision is regarded as the most definitive treatment, giving the highest chance of cure with a recurrence rate of 17% to 23%.^[8] By completely excising the subcutaneous cysts and removing the source of the vesicles, it is possible to eliminate the cutaneous manifestations. Whereas surgical excision offers definitive treatment, it also involves significant risks including scarring, keloid formation, hematoma, wound infection, and nerve injury. Surgery gives the lowest rates of recurrence, but has the highest risk of complications.^[9] However, this may not be feasible in some situations when the involvement is extensive. Recurrence is the rule with other forms of destructive therapy. To conclude, clinicians should discuss goals of treatments with patients when designing a therapeutic plan.

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