

Endoscopic Ultrasound of Pancreatic and Biliary Diseases

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Celiac Plexus and Celiac Ganglion Block and Neurolysis

Treatment of pain by blockade or neurolysis of the celiac plexus has been performed for more than 100 years by percutaneous or surgical techniques. More recently, EUS-guided CPB or celiac plexus neurolysis (CPN) have been widely adopted. In both procedures, a local anesthetic is injected; for CPB, a steroid is usually added, and for CPN, ethanol is usually injected. Various injection methods and injectants may be used and are well summarized elsewhere.^{114,115}

Traditional CPB and CPN procedures involve injections of the soft tissue surrounding the celiac axis, with diffusion of injected fluid into and around the celiac plexus; because celiac ganglia can be directly visualized by EUS in about 80% of persons,¹¹⁶ direct ganglion injection has also been described.¹¹⁷ Few randomized, controlled trials of CPB or CPN have been done. In one prospective, randomized, double-blind trial, percutaneous CPN was more effective than sham injections.¹¹⁸ Two randomized, prospective, nonblinded trials have compared EUS-guided CPB with percutaneous CPB, with both studies reporting better pain relief with the EUS approach.^{119,120} A more recent prospective, randomized trial comparing two EUS techniques (central vs. bilateral injections) reported no difference in pain relief.¹²¹

Common side effects of CPB and CPN include orthostatic hypotension and diarrhea. Complications are uncommon and include retroperitoneal abscess and adrenal artery laceration.^{122,123} Some experts administer prophylactic antibiotics before CPB. Spinal cord injury, with resultant paralysis and loss of bowel and bladder control, is a rare complication of CPB and CPN that probably occurs owing to spasm of a spinal artery. This complication has not been reported with EUS-guided approaches but probably rarely occurs with this modality as well. Direct injection of the celiac ganglia may theoretically decrease the risk of this complication.

References

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