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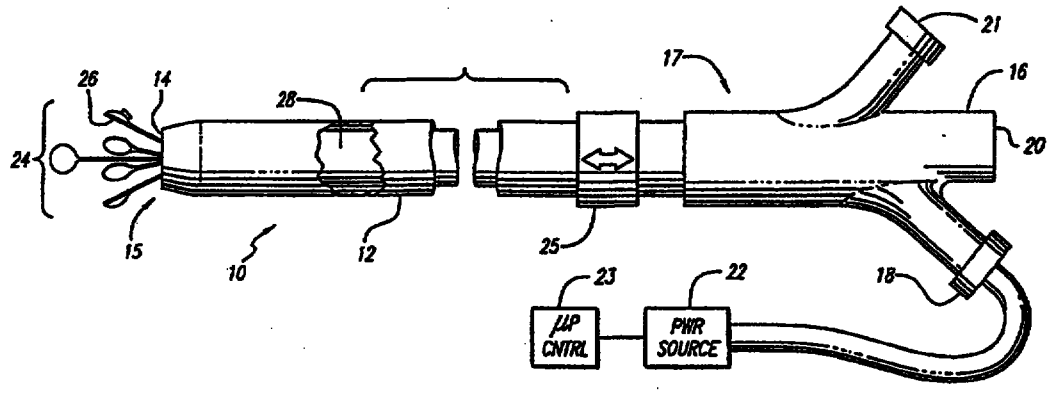
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(54) Title: EXPANDABLE VEIN LIGATOR CATHETER AND METHOD OF USE



(57) Abstract

A catheter (10) includes a plurality of primary leads (30) to deliver energy for ligating a hollow anatomical structure (52). Each of the primary leads (30) includes an electrode (34) located at the working end (15) of the catheter (10). Separation is maintained between the primary leads (30) such that each primary lead (30) can individually receive power of selected polarity. The primary leads (30) are constructed to expand outwardly to place the electrodes (34) into apposition with a hollow anatomical structure (52). High frequency energy can be applied from the leads (30) to create a heating effect in the surrounding tissue of the anatomical structure (52). The diameter of the hollow anatomical structure (52) is reduced by the heating effect, and the electrodes (34) of the primary leads (30) are moved closer to one another. Where the hollow anatomical structure is a vein (52), energy is applied until the diameter of the vein (52) is reduced to the point where the vein (52) is occluded. In one embodiment, a balloon (64) is inflated to occlude the structure (52) before the application of energy. Where the structure is a vein (52), the inflated balloon (64) obstructs blood flow and facilitates the infusion of saline, medication, or a high–impedance fluid to the vein (52) in order to reduce the occurrence of coagulation and to improve the heating of the vein by the catheter (10). The catheter (10) can include a lumen (48) to accommodate a guide wire (53) or to allow fluid delivery.