the side-branch may communicate with collateral vessels that may be located within the treatment zone.

[0010] In accordance with an additional embodiment of the present invention, there is provided a method for treating a vessel. The method includes introducing an outer elongated element having a proximal occlusion element at a distal end thereof into the vessel, introducing an inner elongated element having a distal occlusion element and a pressure relief element at a distal end thereof, positioning the outer elongated element coaxially with respect to the inner elongated element, and positioning a distal end of the inner elongated element distal to the distal end of the outer elongated element. The distal occlusion element is positionable at varying distances from the proximal occlusion element. The method further includes deploying the distal and proximal occlusion elements and introducing a treatment or diagnostic solution through the outer elongated element into the vessel between the distal and proximal occlusion elements while simultaneously removing blood from the vessel via the pressure relief element. The method may further include occlusion of the blood vessel at a location proximal to the proximal occlusion element

[0011] In accordance with further features of the present invention, positioning of the outer elongated element coaxial to the inner elongated element may be done prior to introducing the outer and inner elongated elements into the vessel, or may be done during the introducing, wherein the inner elongated element may be introduced through the outer elongated element lumen, for example. The introducing into the vessel may be done by positioning the catheter over a guidewire positioned within the outer elongated element lumen, or by placing a guidewire through a pressure relief element. The distance between the distal and proximal occlusion elements may be adjusted prior to introducing the drug solution.

[0012] In accordance with yet an additional embodiment, there is provided a catheter system comprising: an outer elongated element having an outer elongated element proximal end and an outer elongated element distal end, said outer elongated element having an outer elongated element lumen extending from said outer elongated element proximal end to said outer elongated element distal end

and having an outlet port at said outer elongated element distal end, and a proximal occlusion element located at said outer elongated element distal end, said proximal occlusion element proximal to said outlet port, said proximal occlusion element comprising a proximal occlusion element proximal end and a proximal occlusion element distal end; an inner elongated element having an inner elongated element proximal end and an inner elongated element distal end, and a distal occlusion element located at said inner elongated element distal end, said inner elongated element positioned within said outer elongated element lumen wherein said outer elongated element is coaxially arranged with respect to said inner elongated element, said coaxial arrangement providing a delivery lumen between said inner and outer elongated elements for delivery of a delivery substance to a vessel through said delivery lumen and through said outlet port, wherein said inner elongated element distal end is distal to and movable with respect to said outer elongated element distal end, and wherein said inner elongated element further comprises a pressure relief element at said inner elongated element distal end; and a guidewire positioned through said pressure relief element.~~In accordance with yet an additional embodiment of the present invention, there is provided a system having an outer elongated element with an outer elongated element proximal end and an outer elongated element distal end, the outer elongated element having an outer elongated element lumen extending from the outer elongated element proximal end to the outer elongated element~~

~~distal end and having an outlet port at the outer elongated element distal end, and a proximal occlusion element located at the outer elongated element distal end, the proximal occlusion element proximal to the outlet port, an inner elongated element having an inner elongated element proximal end and an inner elongated element distal end, the inner elongated element having an inner elongated element lumen extending from the inner elongated element proximal end to the inner elongated element distal end, a pressure relief element at the inner elongated element distal end, and a distal occlusion element located at the inner elongated element distal end. The inner elongated element is positioned within the outer elongated element lumen wherein the outer elongated element is coaxially arranged with respect to the inner elongated element, and wherein the inner elongated element distal end is distal to and movable with respect to the outer elongated element distal end. The system further may include a supply elongated element coaxial to the outer elongated element, the supply elongated element having an inlet port at a distal end thereof, wherein the inlet port is proximal to the outer elongated element distal end.~~

[0012a] In accordance with yet an additional embodiment, there is provided a method for treating a vessel, the method comprising: introducing an outer elongated element into a vessel, said outer elongated element comprising an outer elongated element lumen therethrough and a proximal occlusion element at a distal end thereof; introducing an inner elongated element into the vessel, said inner elongated element comprising a distal occlusion element at a distal end thereof and further comprising a pressure relief element at a distal end thereof; introducing a guidewire through said pressure relief element; positioning said outer elongated element externally and coaxially to said inner elongated element, and positioning a distal end of said inner elongated element distal to a distal end of said outer elongated element, wherein said distal occlusion element is positionable at varying distances from said proximal occlusion element; deploying said distal occlusion element and said proximal occlusion element; and introducing a delivery substance through said outer elongated element into the vessel between said distal and proximal occlusion elements while simultaneously removing blood from the vessel through said pressure relief element while said guidewire is inside said pressure relief element.

[0013] Unless otherwise defined, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs. Although methods and materials similar or equivalent to those described herein can be used in the practice or testing of the embodiments of the present invention, suitable methods and materials are described below. In case of conflict, the patent specification, including definitions, will control. In addition, the materials, methods, and examples are illustrative only and not intended to be limiting.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] The invention is herein described, by way of example only, with reference to the accompanying drawings. With specific reference now to the drawings in detail, it is stressed that the particulars shown are by way of example and for purposes of illustrative discussion of the preferred embodiments of the present invention only, and are presented in the cause of providing what is believed to be the most useful and readily understood description of the principles