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Kipshidze et al.

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[54] **METHOD FOR SEALING BLOOD VESSEL PUNCTURE SITES**

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[57] **ABSTRACT**

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A method for percutaneous sealing of punctures in arterial and venous blood vessels is provided. After catheterization of any vessel or organ for diagnostic or interventional procedures or endoscopic or orthopedic procedures involving the intentional puncture and penetration of a vessel wall, or the accidental puncture of a vessel wall, separate solutions containing fibrinogen and thrombin, respectively, are introduced into the tissue surrounding the puncture site. The solutions are allowed to mix forming a semisolid gel at the time of application at the puncture site. The gel further hardens around the site to seal the puncture closed preventing the leakage of blood. Solutions of antibiotics and epinephrine as well as agents that slow clot breakdown may be included in the mixture. An apparatus for accomplishing the method is also disclosed.

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[51] Int. Cl.⁶ **A51B 17/00**

[52] U.S. Cl. **128/898; 604/53**

[58] Field of Search 128/898, 49, 53, 305, 128/30; 604/49, 53, 305, 306; 606/215; 530/381, 382; 435/214

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