

[54] INJECTION CATHETER AND METHOD

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[57] ABSTRACT

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A catheter and method are provided for injecting a quantity of a liquid, such as a medication, into tissue located immediately adjacent the head of the catheter. A hollow needle such as a hypodermic needle, is movably supported within the head of the catheter and is urged longitudinally through a passageway therein to protrude outwardly from the catheter head after the catheter is selectively located within a body duct. The needle penetrates tissue adjacent the head and a liquid is flowed thereafter through and out the end of the needle into the tissue. The needle may be moved longitudinally through a passageway extending along or parallel to the longitudinal axis of the catheter and head or may be moved longitudinally and laterally through the head to protrude from a sidewall portion thereof at an angle to the body duct into which the head is inserted and in a manner to penetrate the tissue of the duct or an organ disposed adjacent the head. Control of the catheter, needle movement through the head and flow of a liquid through and from the end of the needle, are affected from outside of the body.

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Related U.S. Application Data

[63] Continuation of Ser. No. 201,531, Oct. 28, 1980, which is a continuation-in-part of Ser. No. 885,263, Mar. 10, 1978, abandoned.

[51] Int. Cl.<sup>4</sup> ..... A61M 5/00; A61M 25/00

[52] U.S. Cl. .... 604/164; 604/198

[58] Field of Search ..... 604/51-53, 604/55, 117, 144, 164-169, 192-198, 263

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8 Claims, 6 Drawing Figures

