Abstract:

Background: Endoscopy of the female breast, known as ductoscopy, is increasingly gaining acceptance as a diagnostic procedure worldwide. Recent technical development of ductoscopes and micro-instruments is shifting research interest from diagnostic to interventional ductoscopy. We describe novel technical aspects and the resulting possible future perspective of ductoscopy. Methods: This study comprised the analysis and review of new technical developments from research at the Technical University Munich, Germany, and others, as well as a review of the MEDLINE and COCHRANE databases for the keyword ductoscopy. Results: Diagnostic ductoscopy is performed by many breast physicians worldwide. Interventional ductoscopy, however, depends on an additional working channel and a variety of micro-instruments of 0.4-0.8 mm for procedures inside the breast duct. They are at present not available in the U.S. but are used in Germany and several other countries. Autofluorescence ductoscopy is a new imaging technique used on an experimental base for clinical evaluation to identify intraductal lesions. Laser ductoscopy for removal of intraductal papillomas and 3-dimensional intraductal tracking systems are future projects. Conclusion: Technical innovation and further miniaturization of instruments is supporting a change from diagnostic to interventional ductoscopy. A therapeutic intraductal...
approach as well as autofluorescence endoscopy could potentially eliminate unnecessary biopsies and offer better identification of intraductal lesions.