

Ductoscopy for nipple discharge

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Nipple discharge disorders are a field in which there has been both increasing awareness on the part of patients and advances in management. Cytology smears of discharge material have helped to classify the cellular material, providing information about normality, atypia and malignancy and also about papillary formation of the exfoliated cells.

The most sophisticated investigation method, which can also be used therapeutically, is fiberoptic ductoscopy of the concerned duct in a breast. This technique, although expensive and in its infancy, is a fascinating and promising approach for inspecting the intraductal lumina.

Due to the fact that the majority of both benign and malignant breast disease originates from the cells that line the ductal-lobular unit, development of a minimally invasive procedure, which can directly assess early changes, has important applications to the detection and treatment of these conditions.

There are three primary indications for mammary ductoscopy: These include: Patients with pathologic nipple discharge, Patients with known breast cancer undergoing lumpectomy, and Patients who are at high-risk for developing cancer but have normal breast exam and imaging studies .

The applications of mammary ductoscopy are quite broad, as visual access to the mammary ductal system may allow for diagnostic and therapeutic interventions not previously possible. Current investigations are focused on biopsy and ablation techniques that can be performed during ductoscopy that can correlate visual findings with histopathology .

However, there are some limitations of mammary ductoscopy in clinical practice including inconstant ductal anatomy, length and diameter of the ductoscope in relation to the examined ducts, lacking the ability for histopathologic confirmation of the visual findings and the lack of validated scoring system for ductoscopic findings.