



AUDIT, RESEARCH AND GUIDELINE UPDATE

Summary of the British Thoracic Society guideline for diagnostic flexible bronchoscopy in adults

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ABSTRACT

Flexible bronchoscopy is an essential, established and expanding tool in respiratory medicine. Its practice, however, needs to be safe, effective and for the right indications to maximise clinical utility. This guideline is based on the best available evidence and is a revised update of the British Thoracic Society guideline on diagnostic flexible bronchoscopy.

Flexible bronchoscopy in adults is an essential, established and expanding tool in respiratory medicine. This new guideline aims to ensure that bronchoscopy remains a safe and effective procedure. Since the publication of the previous British Thoracic Society guideline on diagnostic flexible bronchoscopy in 2001¹ there has been a large amount of new evidence which has been incorporated into this guideline.

NEW EVIDENCE AND TOPICS COVERED IN THE GUIDELINE

Particular emphasis has been placed on the safety aspects of bronchoscopy, including patient monitoring, precautions required in specific conditions, prevention and management of complications, adequate staffing, optimal sedation and disinfection. At the same time, the importance of continually auditing the practice of this indispensable technique, with the aim of achieving and maintaining the high diagnostic utility that it offers, is outlined. New features include step by step 'how to do it' sections on commonly used diagnostic procedures, protocols for managing patients on anticoagulation (warfarin and antiplatelet agents) and acute bleeding during the procedure (box 1).

SAFETY AND SPECIFIC COMPLICATIONS ASSOCIATED WITH FLEXIBLE BRONCHOSCOPY

Complications during bronchoscopy result from individual patient characteristics and factors specific to the bronchoscopy, including sedation practice and sampling techniques. A modified WHO safety checklist for bronchoscopy is outlined in online appendix 12 which accompanies the guideline. Complications, particularly serious adverse events (box 2), are described and evidenced-based recommendations made for specific patient groups undergoing bronchoscopy, including patients with asthma, chronic obstructive pulmonary disease and older people.

Box 1 Topics covered in the guideline

- ▶ Specific precautions, contraindications and complications associated with flexible bronchoscopy
- ▶ Safety of flexible bronchoscopy in specific patient groups
- ▶ Monitoring of a patient during the procedure
- ▶ Sedation, premedication and topical anaesthesia
- ▶ Diagnostic accuracy and specific procedures
- ▶ Diagnostic role of bronchoscopy in investigating infections
- ▶ Flexible bronchoscopy in the intensive care unit
- ▶ Cleaning and disinfection of equipment
- ▶ Staffing and staff safety
- ▶ Patient satisfaction and patient care

SEDATION

The majority of bronchoscopists in the UK use sedation for bronchoscopy, with only 5–10% routinely performing bronchoscopy without sedation.^{2–3} The desired depth of sedation is usually 'conscious' sedation, in which the patient maintains airway patency and cardiorespiratory function, and verbal contact with the patient is possible at all times. Scoring scales and a safe sedation protocol are included in this guideline to aid assessment and documentation of sedation level.

THE DIAGNOSTIC ROLE OF FLEXIBLE BRONCHOSCOPY

The diagnostic role of bronchoscopy in the investigation of suspected lung cancer and interstitial lung

Box 2 Serious adverse events

- ▶ Severe bleeding
- ▶ Cardiac arrhythmia requiring treatment
- ▶ Seizures
- ▶ Myocardial infarction/pulmonary oedema
- ▶ Pneumothorax requiring aspiration/intercostal drain
- ▶ Oversedation requiring ventilatory support or reversal
- ▶ Hospitalisation
- ▶ Admission to intensive care unit
- ▶ Death

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diseases is described, with a new section on respiratory infection. Infections encountered in immunocompromised hosts differ from those in immunocompetent individuals and different techniques are required in each group. The techniques needed for bronchoscopic diagnosis depend on the local population, disease prevalence and host defences. A diagnostic algorithm for the use of bronchoscopy in investigating respiratory infection in patients who are immunocompromised is included.

Appendices that accompany the guideline include tables on the drugs used in flexible bronchoscopy, protocols for managing anticoagulation prior to bronchoscopy, acute bleeding complications and disinfecting equipment. A sample patient information leaflet is available, along with a safety checklist and a suggested guide on how to perform some frequently used diagnostic procedures.

The primary objective of this guideline has been to provide practitioners in the UK and beyond with a comprehensive and up-to-date guide to the techniques and complications of basic

flexible bronchoscopy. This guideline is designed to be read in conjunction with the British Thoracic Society guideline for advanced diagnostic and therapeutic bronchoscopy, published in November 2011.⁴

Competing interests See Appendix 1 of the guideline (<http://dx.doi.org/10.1136/thoraxjnl-2013-203618>).

Provenance and peer review Not commissioned; internally peer reviewed.

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