INTRODUCTION

BRONCHOSCOPY – A TOOL OR A MEDICAL SUBSPECIALITY?

By

Petr Pohunek

Pediatric Respiratory Diseases, Pediatric Department 2nd Medical School of Charles University, Prague, Czech Republic, European Respiratory Society, Member of Task Force for standardisation of BAL in children, Member of Task Force for standardisation of FOB in children, Committee on Pediatric Respiratory Training in Europe.

When Gustav Killian back in 1897 for the first time dared to insert a rigid tube into the bronchial tree of a patient who aspirated a foreign body and suffered a life-threatening respiratory distress he may not have expected how successful a chapter of respiratory medicine had just been opened. His pioneering work had been developed by his fellows and others and gradually the visual assessment of the tracheobronchial tree became a very successful alternative to surgical intervention in cases of foreign body aspiration. Technical progress, development and improvement of high quality optical devices, progress in the methods of anesthesia had contributed to gradual shift of bronchoscopy from occasional intervention into precise pulmonary diagnostics. Before the 2nd World War rigid bronchoscopy was already well established as a diagnostic and therapeutic tool and used in many pulmonary pathologies. Next major step came in the mid 1950´s with the idea of arranging the glass fibres into a bundle that allowed transmission of undistorted picture. After first prototypes originating from Japan in the 1960´s, flexible fibreoptic bronchoscopy became gradually a standard technique for diagnostic bronchoscopy since 1970´s. These excellent devices allowed entering more distal parts of the bronchial tree and detecting more distally localized pathologies. Continual improvement of technical possibilities led to higher quality of the image and also allowed manufacturing of thinner instruments that could be used even in very small children. The use of flexible bronchoscopes in children was for a long time mainly limited by a relatively large size of the original instruments. Only in the late 70´s, technical progress allowed to produce instruments of adequately small size without losing too much of the image quality and resolution. First commercially available bronchoscope of "paediatric size" with the 3.6 mm outer diameter was introduced only in 1981. Nowadays, the modern ultrathin instruments allow examination even of children as small as 500 g under the conditions of intensive care.

This major development in bronchoscopy was certainly stimulated by understanding the importance of this method in the diagnostics and

treatment of patient with various respiratory diseases. From a simple tool for removal of foreign body or suctioning of pathological secretions, bronchoscopy became an independent diagnostic method that proved its validity in patients of all ages and most respiratory pathologies. Understanding the findings, interpreting different visible manifestations of various pulmonary pathologies including the assessment of both structural and dynamic appearance during bronchoscopic examination and obtaining various materials from the airways and the lungs contributed largely to the diagnostic preciseness.

Bronchoscopic techniques also contributed significantly to understanding of many pulmonary and even systemic diseases. Methods such as bronchoalveolar lavage (BAL) and bronchial and transbronchial biopsies provided lot of information about interstitial lung diseases, pulmonary malignancies, asthma and many other conditions. Many specialized endoscopic methods have been developed for diagnosis and even treatment of severe bronchial pathologies.

Similarly to the methods of medical imaging, bronchoscopy proved its right to be acknowledged as a separate subspeciality in the broad field of respiratory and intensive care medicine. To obtain maximal benefit for the patient, this method must not be understood just as a technical tool but mainly as a very important imaging and diagnostic method with a very high potential for accurate diagnosis and follow up of the patients. This, of course, requires a continuous development of the technique, gaining skills and knowledge and sharing the experience, studying the results using exact scientific methods and developing of new complementary methods.

In the hands of qualified respiratory physicians bronchoscopy became a very elaborated diagnostic and interventional method and bronchology is now understood as an important subspecialty of respiratory medicine. International respiratory scientific societies, such as ATS or ERS, published guidelines on bronchoscopy and associated methods, various courses on pediatric or adult bronchology have been organized or endorsed by major scientific societies. However, only few countries have a specialized scientific society dedicated to bronchology and associating physicians and health care professionals working or interested in this exciting medical subspecialty. This multidisciplinary approach adopted by such scientific societies has a tremendous impact upon this field. Combining the experience and opinions by professionals from different medical specialties whose common interest is in human airways provides a unique opportunity for a very successful application of current modern and sophisticated techniques for the benefit of the patients and for the general progress in the whole respiratory medicine.

Egypt is one of the countries where this need was fully appreciated and accepted. Establishing of the Egyptian Scientific Society of Bronchology (ESSB) back in 2001 as a non-governmental scientific organization dedicated to bronchology and pulmonary medicine with special interest in bronchoscopy and interventional pulmonology was a major step towards further introduction and developing of bronchology in this area of the world. The Society has uniquely brought together chest physicians, internists, intensive care physicians, respiratory therapists and nurses and provides many opportunities to share and exchange information, improve skills and introduce new methods and techniques. Indeed the educational activities of the ESSB in forms of postgraduate courses, symposia, conferences, e-learning and even publishing of this journal could hardly be competed by any other activities in most countries of the world. Under the distinguished leadership of Professor Tarek Safwat, the Vice President Professor Adel Khattab, Secretary General Professor Tarek Mahfouz and with major contributon of all the other members of the board and the members of the Society, the ESSB not only established its place under the hot Egyptian sun but has now been very much appreciated also in much colder parts of the world. Being a pediatric pulmonologist, I value very much the full integration of pediatric bronchology into the

Society. I am very happy that I have had the privilege to collaborate with people such as Nader Fasseh, Maggie Louis Naguib and many others as this collaboration and contacts represent a major opportunity for mutual stimulation and exchange of information and experience.

The Egyptian Scientific Society of Bronchology provides by it's achievements and reputation the evidence for understanding the importance of bronchoscopy and bronchology for the whole respiratory medicine. I wish the Egyptian colleagues and the whole Society much success in achieving its future goals.