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Bronchoscopes: A View.

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Short Communication

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ABSTRACT

Bronchoscopes are vital tool for diagnosing lung diseases. But, its indiscreet use in hospitals with high patient attendances can prove counter-productive because of cross-infection due to incomplete sterilization.

DISCUSSIONS

During the earlier day's diseases of respiratory system used to be solely based on clinical history, physical findings, routine sampling of body fluids and chest roentgenogram.

The technique of sampling lung tissues for direct evidence or cause or pathology, became easier with introduction of new instruments and newer imaging techniques.

It was a German named Gustav Killian, who performed the rigid bronchoscopy in 1897 [1]. That procedure was performed under local anesthetic-Cocaine. But the patient remained awake throughout the procedure. It was done to remove a Pork bone from the airway. It is nevertheless a useful tool in retrieving inhaled foreign body and sampling the lung tissues etc.

The reach of bronchoscope was further enhanced by introduction fibre-optic bronchoscope. Shigeto Ikeda, a Japanese, performed flexible fiberoptic bronchoscopy in 1968.

Video- assisted bronchoscope made the procedure even much easier as the inside part of the lungs could be visualized on a display monitor.

This helped not only in sampling the distal lung tissues but also helped in stopping the lung bleed, instilling drugs, placing radioactive needles, inserting stents, laser debulking, minor cryosurgery, thermoplasty etc. Then followed the endobronchial ultrasound, available since 1999. It is useful for accurately locating lung lymphnodes and other lesions, for sampling etc. It can help to avoid anatomical structures, as injuring them could be fatal [2].

For sampling, still farther peripheral lesions, electromagnetic navigation bronchoscopy is used since 2004. Bronchoscopes are also useful for aiding intubation. So it is a vital requirement in a Respiratory Intensive Care Unit. There are grey shades to the indiscreet use of bronchoscopes. They can carry the foreign particles along with trapped and usual resident microbes to distal parts of lungs. They can also carry the proximal airway disease causing microbes, distally and to other lung, other than exfoliated malignant cells. At times, there may be, multi drug resistant microbes, which will be responsible for cross-infection. Some of these infections could also be tuberculosis and drug resistance tuberculosis.

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In India, cases of lung tuberculosis are common, which can resemble many other lung diseases. Above that, there is increasing number of drug resistant tuberculosis cases, due to inadequate anti-T.B treatment and increasing number of patients with immune-suppressive conditions. So one has to be discreet, while employing bronchoscopes or else, they can cross-infect patients [1].

In India, there are too many patients attending Outdoor patient departments. Therefore proper sterilization of bronchoscopes are needed for neutralizing sturdy and nagging microbes or else these instruments will spread diseases while trying to diagnose and cure patients.

So, noting down the clinical history along with the proper identification of physical findings of patients allows clinicians to narrow down to few possibilities responsible for lung diseases. Laboratory investigations and imaging helps to further reduce the number of possibilities. If proper diagnosis still eludes, then perhaps, a bronchoscope may come handy in identifying the exact cause of the lung disease.

CONCLUSION

Bronchoscopes are to be used with care for greater benefit of patients with lung diseases, or else it can cross infect patients or spread diseases in regions away from the lesion(s). So selecting patients for such a procedure has to be done with care and more so in a hospital setting, where the outdoor-patient attendances are high. Effective sterilization of Bronchoscopes needs to be stressed upon.

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