Governmental agencies are also exhibiting an increasingly critical degree of scrutiny of advertisements in medical journals. Pharmaceutical firms (at least a gratifyingly large number) have voluntarily policed their own advertisements to a remarkable extent. However, this responsibility cannot be relegated exclusively to one sector of medicine. Each advertisement published in CHEST is screened by a scientific evaluation committee.

The twentieth century has been a sad saga of international fads involving short-lived miracle drugs or diets. If such events are to be prevented in the eighth decade, editorial boards and scientific program committees must accept major responsibility for the evaluation of new diagnostic and therapeutic measures. However, human fallibility is an eternal attribute of man, and we must assume that in the future some judgmental errors will be made by the government, editors, and scientific program committees. Some of the deleterious effects of these mistakes can be obviated if every clinician recognizes that the individual experiences of the physician must be the final arbiter in the critical evaluation of the validity and significance of therapeutic recommendations. Thus, understanding of the discipline of research is of fundamental importance, not only to editors, referees, and investigators, but also to the bedside clinician. The reader who can distinguish between sound and faulty investigational techniques is enabled to draw his own conclusions. The editors of CHEST do not accept the premise that it is inevitable that practitioners will become technicians who accept the conclusions of every published report without reservation. We shall continue to insist that every manuscript be so constructed that the willingness and the ability of the physician to be a critical reader are honored.

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REFERENCES

1 Schoolman, H.M.: Medical research: A profession peopled by amateurs, Clinical Research, 14:9, 1966.


A Coordinated Surgical Approach to Diagnosis and Treatment of Lung Cancer

In the evaluation of patients with suspected lung cancer a host of diagnostic aids is available before proceeding with open thoracotomy. Most tests are designed not so much to yield the diagnosis, but rather to help determine whether or not the pulmonary lesion is primary, and if so, localized and therefore amenable to curative resection.

Non-surgical procedures are largely radiologic techniques including special views, tomography, contrast studies of vessels and bronchi, systemic surveys and scans. By their very nature, these examinations must be performed on separate occasions. None of them yields tissue specific for diagnosis or determination of metastatic spread.

Surgical methods designed to obtain such histologic material include bronchoscopy, scalene biopsy, pleural biopsy, mediastinoscopy, and, in many instances, open thoracotomy itself. It is customary in most clinics to proceed in a discontinuous, time-consuming fashion from one surgical procedure to the next, awaiting reports of paraffin sections each time until the way has been cleared for open thoracotomy. Thus, while the desired information is ultimately forthcoming, the patient usually makes two or three separate trips to the operating room, sometimes under the care of different surgeons, before finally being scheduled for a definitive procedure. Falor recognized these shortcomings and advocated a one-stage approach.

Since we began doing mediastinoscopy in 1965, it has become the keynote of our surgical diagnostic appraisal in lung cancer. It has almost completely replaced scalene biopsy and is performed routinely in all cases of proved or suspected lung cancer even if the mediastinum is radiologically normal. After an initial period of familiarization with the technique, we have come to combine it with bronchoscopy and thoracotomy all at the same sitting under the same general anesthesia.

First, the ventilating bronchoscope is passed, the bronchial tree inspected and appropriate biopsies taken. A topographic evaluation for resection is made (ie lobectomy, pneumonectomy or sleeve resection). Next, the bronchoscope is replaced by a single-lumen anode type endotracheal tube and mediastinoscopy with biopsy and frozen section is carried out. If there is no mediastinal involvement, the mediastinoscopy wound is closed, the single-lumen endotracheal tube is replaced by a double-lumen type (Carlens, Gordon-Green or Robertshaw) and
the chest is opened for definitive lung resection. Under this plan, in over 40 cases with negative mediastinoscopies, curative resection has been possible in almost 90 per cent.

The combined approach is terminated at any point where evidence of inoperability is obtained—ie gross involvement of trachea and/or carina, malignant mediastinal adenopathy, non-malignant diagnosis not requiring resection (ie tuberculosis, sarcoidosis), or those rare instances in which frozen section is inconclusive or questionable and review of paraffin section is mandatory.

Requirements essential for the success of this coordinated approach are as follows: 1) the surgeon should be skilled in all of the procedures; 2) the pathologist must be thoroughly conversant with frozen section techniques; 3) the anesthetist should be familiar with the various endotracheal tubes and anesthetic techniques, and 4) the operating room organization and staff must be amenable to such a combination of procedures.

The advantages of this coordinated surgical approach are its prompt definitive solution to the patient's problem, and its efficient use of staff and facilities.

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REMOTE ETIOLOGIC FACTORS IN PLEURAL EFFUSION

It is beyond the framework of this brief note to deal with the nosology of pleural effusion. Instead, attention will be focused on transudates in the pleural space. They represent collection of noninflammatory serous fluid which is thin, clear and usually straw colored. Its specific gravity is less than 1.018, usually between 1.012 and 1.014. Its protein content is less than 4 gm per 100 ml, commonly about 2.5 gm per 100 ml. It contains less 500 lymphocytes per cu mm. These data may serve as a guide but cannot be relied upon with absolute certainty. Most common cause of hydrothorax is heart failure and renal disease: the former when it results in increased pulmonary venous pressure; nephrosis brings about formation of pleural transudate through osmotic imbalance due to colloidal changes. Other possible pathogenic factors in this regard include cirrhosis of the liver, severe malnutrition through hypoproteinemia, severe vitamin C deficiency, thrombosis of large endotracheal veins, large mediastinal tumors which block lymph flow or venous flow. The clinical observations of Meigs of Boston established the association of ovarian neoplasms with pleural effusion as a syndrome in 1937. This finding was substantially documented in his subsequent publications. Deservedly, his name serves as its identifying eponym even though similar data were reported by others in several publications since 1866. Meigs' first report dealt with seven cases of fibroma of the ovary with associated ascites and right pleural effusion. Subsequently it was noted that pleural effusion may be associated with other benign neoplasms of the ovaries. These include theca cell tumors, which are firm, encapsulated structures imbedded in textured connective tissue; granulosa cell tumors of solid consistency, usually localized within the confines of the ovaries; Brenner tumors which vary from microscopic to large size; multilocular cystadenomas and some unclassified tumors. Also, ovarian sarcoma and carcinoma may result in ascites and pleural effusion with or without cytologic evidence of metastasis. According to prevailing concepts, effusion in the pleural space results from the passage of ascitic fluid through the lymph channels of the diaphragm, through the latter's occasional minute congenital defects or small ruptures which may follow stretching of the diaphragm by large ascites. Confirmatory evidence has been demonstrated by means of carbon and radioactive isotope-labeled albumin instilled into ascitic fluid in situ. Some clinicians are of the opinion that antigens derived from tissue debris of ovarian tumors, which are transmitted through the lymphatics to the pleural space, provoke pleural hyperemia, vasodilatation and exudation. The effusion is found on the right side in 70 per cent, on the left in 20 per cent and it is bilateral in 10 per cent. Meigs' syndrome is usually postmenopausal. Cough, chest pain and/or dyspnea may be presenting symptoms. As to treatment, removal of the ovarian tumor is mandatory. It results in complete disappearance of the pleural effusion.

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