catheters for permanent pacing, the catheter usually tends to enter directly into the apical region of the right ventricle. No special effort should therefore be made, in my opinion, to try to advance the catheter in the first stage into the main pulmonary artery (as suggested by Kaul and Bain) just to confirm crossing of the tricuspid valve, as this can be established by methods mentioned previously. This extra manipulation of the catheter prolongs implantation and the time of irradiation, may increase the incidence of disturbances in rhythm, and is superfluous in cases where the electrode-catheter tends to enter directly into the apical region of the right ventricle.

Zvi Schlesinger, M.D., F.C.C.P.
Director, Heart Institute
Asaf Harofe Hospital, Zerifin, Israel

Looped Bronchoscope

To the Editor:

The complications of fiberoptic bronchoscopic procedures have been reviewed both by a survey using questionnaires and by prospective study. We report a previously undescribed occurrence of a flexible fiberoptic bronchoscope looped within the trachea of a patient.

Case Report

A 57-year-old black man was admitted to the West Haven (Conn) Veterans Administration Hospital with a two-week history of pleuritic pain in the right anterior portion of the chest. His medical history was remarkable because of adult-onset diabetes mellitus, a previous right-sided pneumothorax from a knife wound, and 100 pack-years of smoking. An earlier chest x-ray film showed upper lobar bullous disease, while the x-ray film taken on admission demonstrated two air-fluid levels in the right upper lobe, with an adjacent infiltrate.

Fiberoptic bronchoscopic examination (Olympus BF-B2) was performed with the patient in the supine position. During the examination of the right upper lobe, the patient coughed, dislodging the distal end. The bronchoscopist and his assistant, who was looking through the lecture scope, recognized that the bronchoscope remained in the trachea but, surprisingly, saw a black linear structure lying parallel within the trachea. Fluoroscopic examination confirmed that the bronchoscope had turned back upon itself, forming a loop (Fig 1). The bronchoscope was partially withdrawn, with prompt return to its original position. Further examination revealed no damage to the glass fibers, and the procedure was completed without further incident. There was no injury to the patient's larynx or tracheobronchial tree.

Discussion

With the increasing technical developments involved in the care of patients, we add the "looped" bronchoscope to the "knotted" nasogastric tube, the "knotted" catheter for peritoneal dialysis, the "flipped" pacemaker, and other unplanned misfortunes.

Donald A. Mahler, M.D.
and Brett J. Gerstenhaber, M.D.
Pulmonary Disease Section
Yale-New Haven Medical Center, New Haven, Conn

References


Inflammatory Pericardial Cyst

To the Editor:

Cysts of the pericardium are rare and usually asymptomatic and are discovered on routine roentgenographic examination of the chest. Such cysts are always benign but must be differentiated from other lesions, often requiring an exploratory thoracotomy. Because of the unique features of one such case, we reviewed the pathogenesis of the entity and concluded that pericardial cysts, generally considered to be congenital, can also be acquired. This is in agreement with scattered reports in

Figure 1. Spot x-ray film taken during fluoroscopic examination, demonstrating bronchoscope looped within trachea.

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which inflammation was found to be the only possible explanation for the formation of such cysts.

**CASE REPORT**

An asymptomatic 49-year-old white man was found to have a mediastinal mass on the chest x-ray film. A previous x-ray film taken 14 years before had been normal. A second chest x-ray film taken four years prior to the present one exhibited a 6-cm mediastinal mass. The current chest x-ray film showed the mass to measure 7 cm in diameter (Fig 1). Routine laboratory data were normal. Bronchoscopic examination, a thoracic tomogram, barium swallow, and an aortogram failed to pinpoint the origin of the lesion. The patient had never been treated for nor diagnosed as having tuberculosis, but the cutaneous test with purified protein derivative of tuberculin was strongly positive.

At thoracotomy a cystic structure was found to be firmly adherent to the pericardial sac over a narrow area. The cyst, filled with a brownish fluid, was completely resected. The pathologic examination revealed a process of localized sclerosing granulomatous pericarditis, very likely due to tuberculosis. The thick fibrotic wall of the cyst contained chalky lesions in which neither acid-fast bacilli nor fungi were identified.

**DISCUSSION**

It is generally held that pericardial cysts are of congenital origin, but some believe that such lesions may also develop as the result of inflammation. A few reports have dealt with the possible role of inflammation as the causative factor. Maier believes that a pericardial diverticulum arises from a congenitally weak portion of the pericardium, which is gradually stretched out by the pericardial fluid under pressure.

In the present case the absence of a mass on the chest x-ray film taken 14 years earlier indicates that such a lesion was either nonexistent or too small to be detected. Considering that the microscopic findings point to a tuberculous involvement of the pericardium and that a cystic mass developed over a period of several years, the only explanation for its pathogenesis is that a diverticulum was formed originally through a weak area in the parietal pericardium; its communication with the pericardial cavity was subsequently obliterated by fibrous tissue, the diverticulum thus becoming a cyst. Our findings support the existence of acquired pericardial cysts, the major role in their development being played by inflammation.

Jose F. T. da Rosa, M.D.;
William K. Major, Jr., M.D.;
Mario Montes, M.D.; and Andrew A. Gage, M.D.
Departments of Surgery and Pathology
School of Medicine
State University of New York at Buffalo

*Presently with Division of Thoracic Surgery, Ohio State University Hospitals, Columbus.
Reprint requests: Dr. da Rosa, Division of Thoracic Surgery, Ohio State University Hospitals, 410 W Tenth Ave, Columbus 43210

**REFERENCES**

Coronary Arterial Spasm and Collateral Circulation

To the Editor:

A case of intermittent visualization of the coronary collateral circulation is presented.

Case Report

Coronary arteriographic studies were performed on a 52-year-old man because of severe progressive angina. First, contrast material was injected into the right coronary artery and showed 100 percent obstruction in its middle portion. Then injection into the left coronary artery revealed subtotal obstruction of the left anterior descending coronary artery and of the obtuse marginal branch of the circumflex coronary artery; retrograde opacification of the distal portion of the right coronary artery was noted. After sublingual administration of nitroglycerin, repeated opacification of the right coronary artery revealed 90 percent obstruction in its middle portion, with adequate distal visualization. Subsequent opacification of the left coronary artery revealed the persistence of the subtotal occlusions described before; however, there was no retrograde visualization of the distal portion of the right coronary artery. Left ventricular angiograms showed a uniform pattern of contractility, with an ejection fraction of 65 percent. The patient did not have angina during the procedure. There was no elevation of the S-T segment before or after the first injection into the right coronary artery.

Discussion

The anatomic existence of coronary arterial collateral vessels does not imply their functional role. The case described herein gave us an opportunity to observe the anatomic presence of collateral vessels which were functional in one instance and not so in the other. It was probably the coronary arterial spasm on top of the fixed atherosclerotic narrowing that generated a large enough gradient of pressure between the distal portion of the right coronary artery and the left anterior descending coronary artery so that the collateral vessels became functional across those points.

The fact that neither angina nor ST-segment elevation developed along with the right coronary arterial spasm supports the idea that the collateral vessels protected the inferior wall from the acute transmural ischemia. It is interesting to speculate about the relative role of repeated coronary arterial spasm in enhancing the development of collateral circulation which is primarily affected by fixed atherosclerotic lesions.

Mahir R. Audeh, M.D., Division of Cardiology University of Tennessee Center for the Health Sciences, Memphis

References


Administration of Oxygen with Mouth-Held Nasal Prongs during Fiberoptic Bronchoscopy

To the Editor:

Fiberoptic bronchoscopic procedures may result in significant arterial hypoxemia. Therapy with supplemental oxygen administered either via a fenestrated face mask, via an oxygen mask (Ventimask) providing 28 percent oxygen, or via a modified Ventimask (Ventimask) providing 40 percent oxygen has been shown to protect patients. In a previous communication, the use of a single nasal catheter was proposed as more convenient than a face mask, but without documentation of the ability of the catheter to maintain an adequate arterial partial pressure of oxygen (PaO2). We, too, have found that the face mask is cumbersome and that it is frequently removed for expectoration of sputum. We report the efficacy of a simple method of delivering oxygen during transnasal fiberoptic bronchoscopic procedures, ie, nasal prongs held in the mouth.

Materials and Methods

In patients undergoing transnasal fiberoptic bronchoscopic procedures with topical anesthesia with lidocaine, samples of arterial blood were drawn from an intra-arterial catheter at the following times: prior to topical anesthesia; after topical anesthesia; during the fiberoptic bronchoscopic procedure at 5, 15, and 30 minutes after entering the trachea; at the termination of the procedure; and 20 minutes after the fiberoptic bronchoscopic procedure had been completed. Samples of arterial blood were analyzed immediately to determine the PaO2 with the use of a blood gas analyzer (Radiometer BMS3 Mk2 Blood Micro System). After the initial two samples were drawn, administration of humidified oxygen at a rate of 7 L/min from a calibrated gauge was begun via unmodified nasal prongs (Hudson cannula 1104), which were placed in the mouth and held there by looping the plastic tubing over the ears and securing it snugly at the neck. The patient was instructed to breathe through his mouth, around the prongs.

Results

Fifteen of the 16 patients had their PaO2 in an ac-