

BAILEY, C. C., AND BETTS, R. H.: *Cardiac Arrhythmias following Pneumonectomy*. New England J. Med. **229**: 356-359 (August) 1943.

The occurrence of as rare a postoperative complication as auricular flutter or auricular fibrillation in 10 per cent of a series of 78 pneumonectomies is described in this paper. Nine cases are reported in which such abnormal rhythms (1 nodal tachycardia, 5 auricular fibrillations, 2 auricular flutters and 1 flutter-fibrillation) were detected at periods from two to nineteen days after operation. Seven of these operations were performed for bronchiogenic neoplasms and the other two for pulmonary abscess and tuberculosis. In two of these cases abnormalities of cardiac rhythm, paroxysmal tachycardia and extrasystoles, respectively, had been previously noted. In a further series of 63 lobectomies no such arrhythmias had been detected.

While principally concerned with the reporting of these cases, the authors do speculate as to the possible causative factors. One case in which auricular flutter appeared on the nineteenth day after operation had a pericarditis with effusion, and the tachycardia disappeared after drainage of the fluid. In the remaining cases, two factors are suggested: the shift in the mediastinum, both to the side of operation and later to the opposite side because of pleural effusion, and irritation of the vagus nerve from small infected areas in the thoracic cavity. With the exception of the case of pericarditis, none of these arrhythmias was accompanied by any signs of cardiac failure. They were all treated promptly with digitalis and in every case the rhythm had returned to normal in forty-eight hours or less.

[The transient nature of these disturbances of rhythm, and their occurrence in patients with no detectable

cardiac lesions before or after the event, and the return of the rhythm to normal with digitalis (which does not usually cause a fibrillation of the auricles to stop) suggests that they are due to a temporary stimulation through an extracardiac mechanism. It is easy to speculate on mechanisms which by direct or reflex means may accentuate the tachycardia which always follows such an operation pneumonectomy to the extent that a partial auriculo-ventricular block appears. To determine with certainty the cause of these bizarre disturbances will not, however, be so simple, and will only be possible to do so when these cases are investigated carefully as they arise, and measures are taken to exclude in each one such factors as vagus or sympathetic stimulation and gross distortion of the mediastinum by pleural effusion.]

I. R.

WILLIAMS, ASHBEL C., AND GURALNICK WALTER C.: *The Diagnosis and Treatment of Ludwig's Angina*. New England J. Med. **228**: 443-457 (April 8) 1943.

The authors report a series of twenty cases of Ludwig's angina. They stress the fact that respiratory obstruction is the most serious and the most frequent complication occurring in this group of patients. The technic which they have found satisfactory for dealing with the respiratory obstructions consists of performing a tracheotomy preoperatively in the most serious cases or exposing the trachea under local anesthesia before the induction of general anesthesia. All patients receive intravenous barbiturate anesthesia, and in two, tracheotomies were performed. There were two deaths in the series, one from hemorrhage from the tracheotomy wound on the third day, and one from delayed tracheotomy. This is

per cent mortality compares favorably with the 54 per cent mortality in their previous series. The authors mention the preoperative use of sulfanilamides in patients receiving pentothal anesthesia and see no clinical contraindication to this combination of drugs. 6 references.

V. A.

CURRENS, J. H.; WHITE, P. D., AND CHURCHILL, E. D.: *Cardiac Arrhythmias following Thoracic Surgery*. New England J. Med. 229: 360-364 (August) 1943.

Twelve cases of cardiac arrhythmia following thoracic operations are described. The cases include 8 of auricular fibrillation and 4 of auricular flutter. They occurred after pneumonectomy, lobectomy or partial esophagectomy and represent a rate of occurrence of nearly 25 per cent after such operations. With one exception the arrhythmias appeared within five days of the intervention; the other, in which auricular fibrillation occurred on the seventeenth postoperative day, responded promptly to an increase in the intrathoracic pressure from negative to positive.

Arrhythmia was transient in every case but one, and in this the auricular flutter persisted until the patient's death six months later. With this exception the disturbances of rhythm never lasted, apparently, for more than three days. It is remarked that in two cases premature auricular beats were noted before or after the tachycardia and that in four of their series there was at least one recurrence of arrhythmia following restoration of normal rhythm. In none of the cases was there any sign of cardiac failure.

*Comment:* In attempting to decide the cause of these arrhythmias the authors admit that it is obscure, but point out that all their patients with

these disturbances had passed the age of 39, and also mention certain associations of these arrhythmias with the onset of other complications such as empyema and atelectasis. One case was found at autopsy to have a pericarditis.

In view of the frequency with which these disturbances arise, the use of quinidine as a prophylactic measure after thoracic operations may well be justified. The occurrence of auricular premature beats may give warning of the imminence of a more serious arrhythmia which quinidine might prevent. Where one of these disturbances has appeared three alternatives are at the disposal of the clinician. Since most of the patients will re-establish normal rhythm in any case no treatment may be necessary. In certain cases normal rhythm may be restored by quinidine. If cardiac failure threatens, and the arrhythmia seems to be a threat to the patient's well-being, it is essential that rapid digitalization be undertaken forthwith.

I. R. G.

ALLEN, F. M.: *Theory and Therapy of Shock: Excessive Fluid Administration*. Am. J. Surg. n.s. 61: 79-92 (July) 1943.

"The irreversibility of very advanced shock is undisputed. Any therapeutic advance requires an attack on this problem of irreversibility. Although Moon furnished the best phrasing of the idea that 'the wheal is shock in miniature,' he did not draw the therapeutic inference which seemed to me logical. Is it rational to try to prevent formation of the wheal? Since shock is by definition a fluid shift, and the injured tissues evidently somehow need fluid to form the 'wheal,' why not help them to form it by supplying a fluid that will pass readily through the capillary walls