

ABSTRACTS OF RECENT PUBLICATIONS
A STUDY OF AURICULAR FIBRILLATION FOLLOWING
OPERATIONS FOR GOITER:

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Auricular fibrillation is the most common cardiac irregularity observed in the presence of hyperthyroidism, and in a considerable number of cases the arrhythmia first appears shortly after thyroidectomy has been performed. This investigation is based on 405 consecutive cases in which thyroidectomy was performed. Adenomatous goiter without clinical or laboratory evidence of hyperthyroidism was present in 192 cases, while in the remaining 213 cases hyperplastic or adenomatous goiter associated with hyperthyroidism was present. Auricular fibrillation was present before operation in 16 patients (7 per cent) who had hyperthyroidism. Postoperative auricular fibrillation developed in 31 (16 per cent) of the 197 patients who had normal rhythm before operation. The arrhythmia also was present before operation in two patients who had adenomatous goiter without hyperthyroidism.

The age of the patient, the type of goiter and the duration of hyperthyroidism appear to be the most important factors predisposing to the development of postoperative auricular fibrillation. The degree of elevation of the basal metabolic rate is of little significance. All the patients in this series were between the ages of thirty-five and sixty-one years, but only five were less than forty years of age. Nine patients had had symptoms of hyperthyroidism for more than thirty months; and in one instance a thyroidectomy had been performed for hyperthyroidism eight years before admission here, and there had been a gradual recurrence of symptoms after four years. Of 35 patients in whom enlargement of the thyroid was present, the symptoms had existed from one to more than forty years in the 27 patients who were able to estimate its duration. Noticeable goiter had been present for less than five years in three of these 27 cases.

The results of this study indicate that the factors which predispose to the development of postoperative auricular fibrillation are the same as those which govern the occurrence of arrhythmia in the presence of hyperthyroidism before operation is performed. In postoperative auricular fibrillation, however, an additional stimulus connected with the operation or the early postoperative course is necessary to initiate the arrhythmia. The immediate increase in the rate of metabolism following operation probably is the essential factor responsible for the initiation of the arrhythmia.

ABSTRACTS

Postoperative auricular fibrillation is more common both relatively and absolutely in patients with adenomatous goiter than in those with hyperplastic goiter. This fact cannot be accounted for entirely by differences in the ages of the patients belonging to the two groups. The long duration of thyroid enlargement in the majority of cases of adenomatous goiter suggests an explanation for the more common occurrence of postoperative fibrillation in this group. It is possible that many of these patients have experienced repeated or prolonged periods of low-grade, unrecognized hyperthyroidism, before symptoms appeared which were of sufficient severity to necessitate medical advice. Such subclinical thyrotoxicosis might favor the gradual progression of myocardial damage and thus predispose to the development of postoperative auricular fibrillation.

Postoperative auricular fibrillation generally begins during the first sixty hours after operation. It rarely causes circulatory embarrassment, and normal rhythm usually is re-established spontaneously within forty-eight hours after its onset. However, gradual digitalization is begun with the onset of the arrhythmia, so that the complete effect of the drug can be obtained more readily in the rare instances in which mild congestive failure does develop. If the arrhythmia should persist for more than a week, quinidine may be used to restore normal rhythm.