THE PROGNOSIS OF HEART DISEASE*

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Summary and Conclusions

1. The after histories of a group of 1,000 men suffering from heart disease have been followed for 10 years.
2. Only 13 of the 1,000 remain untraced; the after histories throughout the period are completely known for 70 per cent.
3. The diagnostic criteria used in the classification of the cases are defined. The cases are classified chiefly from two aspects (1) valve lesion, (2) exercise tolerance and cardiac enlargement.
4. Autopsy reports are available for 142 or one-third of the deaths. Comparison of clinical diagnosis with post-mortem findings shows that diagnosis of valve lesion is in general accurate. Between the clinical estimate of heart size and the weight of the heart after death the agreement is sufficiently close.
5. The after histories are characterized mainly by the following features:—
   (a) 51 per cent are known to be alive. Of these survivors at least 42 per cent have lived uneventfully throughout and with unchanged physical signs.
   (b) Auricular fibrillation, present originally in 10 per cent develops later in 8 per cent.
   (c) Subacute bacterial endocarditis, present initially in 7 per cent develops later in 5 per cent.
   (d) 47 per cent are known to have died.
6. Correlation of after history with the factors used in the classification shows that after history is to be foretold not so much by the presence or absence of valve defect

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or by the type of defect but much more closely by the degree of cardiac enlargement and by the grade of cardiac failure as estimated first by the exercise tolerance and secondly by the presence of venous congestion.

7. Prognosis is most satisfactory when based on cardiac enlargement and cardiac failure and is modified by associated findings.

8. On this basis the chief prognostic indications are :—

    (a) *Good prognosis*—cases with little or no enlargement and good or fair exercise tolerance. Only about one-fifth of these cases die; almost a half of them live uneventfully and unchanged.

    (b) *Poor prognosis*—cases with moderate enlargement and poor exercise tolerance. Half die within 10 years.

    (c) *Bad prognosis*—cases with great enlargement or congestive failure. Few survive. The average life in the presence of venous congestion is 2½ years.

9. The chief factors modifying these prognostic indications are :—

    (a) subacute bacterial endocarditis. The average life in its presence is 6 months. It develops mainly in cases of non-syphilitic aortic regurgitation (10 per cent).

    (b) the onset of auricular fibrillation influences unfavourably the general prognosis; the outlook in cases of established fibrillation depends on cardiac enlargement and exercise tolerance. In cases of congestive failure its presence influences favourably the immediate prognosis; the average life is increased to 5 years. It develops mainly in cases of mitral stenosis (20 per cent).

10. Prognosis within the groups of cases with aortic regurgitation, mitral stenosis, etc., is discussed for each group separately. Prognosis is least favourable

in aortic stenosis and syphilitic aortic regurgitation. There is no material difference in the death rate in those with non-syphilitic aortic regurgitation, with mitral stenosis, or with these lesions combined.

11. The general outlook for cases of valve defect is not so bad as is generally thought, even for syphilitic aortic regurgitation. The average life in cases with aneurysm is over 5 years and in its absence only 58 per cent of those with syphilitic aortic disease die within 10 years. Treatment with arsenic and mercury slightly but definitely prolongs life, treatment with potassium iodide does not.

LIBRARY NOTES

Gifts from Dr. Neumann

Dr. Ignac Neumann has presented to the Academy some interesting old pamphlets and manuscripts which have been on exhibition in the Library during the last two weeks of June and the first week of July. Among these are:

"An Abstract of the Patent Granted by His Majesty King George to Benj. Okell, the Inventor of a Medicine . . ." This was printed in London by J. Cluer, and reprinted in New York by John Peter Zenger in 1731.

A printed bill of mortality for Portsmouth, New Hampshire, in 1807, prepared by Dr. Lyman Spalding.

Photostat copies of various certificates given to Dr. Soloman Drowne (1754-1834), including a degree of M. A. from Dartmouth in 1771, signed by George Wheelock; a certificate from the Pennsylvania Hospital in 1774, signed by Thos. Cadwalader, John Redman and Saml. Pemberton; and one from the American Academy of Arts and Sciences, 1790, signed by James Bowdoin and Joseph Willard.

For the gift of these and other noteworthy documents we are very grateful to Dr. Neumann.

Helen Field