THE INCIDENCE OF HEART DISEASE IN THE PACIFIC NORTHWEST

T. HOMER COFFEN, M.D.
Portland, Ore.
From the Oregon State Board of Health
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54. Masor
55. Malco
56. McCa
57. McCh
58. McCo
59. McCo
60. McCo
61. Meaki
62. Mendi
63. Neubh
64. Noval
65. Orian
66. Peuch
67. Pincu
68. Price
69. Potter
70. Potter
71. Rathe
72. Reitzx
73. Ringe
74. Roe a
75. Rupcl
76. Salve:
77. Schlo:
78. Schpo
79. Scott.
80. Shern
81. Shern of
82. Smirn
83. Soner
84. Steil:
85. Stewa
86. Stews
87. Swett
88. Trenc
89. Tiger
90. Umbr
91. Vine:
92. Wald
93. Waits
100. Editorial (annotations), Lancet, 1926, ccx, 299.
THE INCIDENCE OF HEART DISEASE IN THE PACIFIC NORTHWEST

T. HODGE COFFEN, M.D.
PORTLAND, ORE.

With increasing interest in heart disease it is apparent that certain cardiovascular lesions may be more prevalent in one part of the country than in another. It has been shown that acute rheumatic fever is more prevalent in rigorous climates than in equable ones. Syphilis in a charity hospital in the South is more common (largely because of negro admissions) than in other localities. In regions where goiter is endemic the cardiovascular symptoms due to this condition can be studied to advantage. One would expect the more common forms of heart disease, such as those associated with arterial hypertension, to be equally distributed regardless of locality. A comprehensive report of the work recently carried out in New York State serves as an example of the value of local studies.

In attempting a study of the incidence of heart disease in the Pacific Northwest, we are aware of the size of the problem and the inadequacy of material for careful and comprehensive statistical value but we think, a preliminary cross-section of the material at hand.

For comparison with other parts of the country as to mortality from all causes and mortality due to diseases of the circulatory system, the following tables are presented:

### Table I

<table>
<thead>
<tr>
<th></th>
<th>DEATH RATE PER 1000 DUE TO ALL CAUSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon</td>
<td>California</td>
</tr>
<tr>
<td>Average for 10 yrs.</td>
<td>Average for 9 yrs.</td>
</tr>
<tr>
<td>12.4</td>
<td>14.0</td>
</tr>
</tbody>
</table>

### Table II

<table>
<thead>
<tr>
<th></th>
<th>DEATH RATE PER 1000 DUE TO DISEASES OF THE CIRCULATORY SYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon</td>
<td>California</td>
</tr>
<tr>
<td>Average for 10 yrs.</td>
<td>Average for 9 yrs.</td>
</tr>
<tr>
<td>1.9</td>
<td>2.62</td>
</tr>
</tbody>
</table>

*Read at the Fifty-Second Annual Scientific Session of the American Heart Association, Portland, Oregon, July 9, 1929.

From the Oregon State Board of Health.
MATERIAL STUDY

To obtain a cross-section of data for study composed of patients presenting themselves in private practice and in hospital admissions the following sources were used, comprising a total of 28,661 cases, of whom 13,258 were medical patients. While these figures are all obtained from one locality in the Pacific Northwest, many of the patients came from adjacent states. To make the figures more comprehensive, figures from the larger cities of the state of Washington are desirable. The relation of cardiovascular disease to total admissions and to medical admissions is shown in Table III.

Table III

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<th>MATERIAL STUDY</th>
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The Multnomah County Hospital is the teaching hospital of the University of Oregon Medical School and is affiliated with the Out-patient Department, the Portland Free Dispensary. The patients are mostly past middle age; therefore the incidence of cardiovascular disease is high (60 per cent). Patients with chronic valvular disease are also probably more numerous than in other hospitals. The Good Samaritan and St. Vincent's hospitals are private institutions, the majority of patients being surgical (59 per cent, Good Samaritan; 86 per cent, St. Vincent's). Of the 13,258 medical patients, 3,488 or 26 per cent showed cardiovascular disease. Acute rheumatic fever shows a low incidence, which suggests error. In the private patient group but few children are seen, which would lower the figure, but the Doernbecher Hospital for Children shows only a slightly higher figure. Pediatricians in the Pacific Northwest are of the opinion that the disease is quite rare, though no published studies are available. Here the incidence of acute rheumatic fever was 0.12 per cent. Climatic factors, as brought out by the authors referred to, 4, 10 may be assumed to explain this, for the climate of this territory is mild.

Faulkner and White found the incidence of rheumatic fever and chorea to vary from 0.2 to 5.8 per cent of medical cases. Chronic valvular disease, as seen in their study, is no criterion as to incidence, for many of these patients date their trouble to rheumatic fever in childhood. They are not natives of this part of the country. Goiter in this region is endemic. The figures take into account only goiter patients in whom circulatory symptoms were prominent.

CLASSIFICATION OF VARIOUS TYPES OF HEART DISEASE

While hospital records were found satisfactory for the above, they were disappointing for use as to structural or etiologic classification because of methods of indexing diseases. One finds such ambiguous terms as "heart failure" and "broken compensation" and "dilated heart". Because of methods of indexing diseases. One finds such ambiguous terms as "heart failure" and "broken compensation" and "dilated heart". The term "congestive heart failure" is a misnomer, according to Drs. H. B. Howe and C. H. Yeatman 7, who state, "At present, the field of cardiac pathology is being developed on a scientific basis with the result that many terms of the old are being discarded and results showing s in all interest, as pointed out in the annual report of the Association of American Physicians, 1923.

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In the goiter group there were 144 patients who showed various degrees of effect upon the heart. Many simple goiters were seen which are not included.

In addition to those classified cardiovascular patients, 45 patients came for heart examination in whom no heart disease was found.

Hypertensive cardiovascular disease shows a high incidence, as in other localities. This term is used to include those cases with peripheral arteriosclerosis, renal arteriosclerosis, and renal atherosclerosis. As shown in previous examination rather than to attempt to separate those with slight or doubtful arteriosclerosis from those with obvious evidence of arteriosclerosis. It is the commonest type of cardiovascular disease, resulting in cardiac, renal, or vascular involvement.

In 465 autopsies at the Good Samaritan Hospital 96 showed cardiovascular lesions as the cause of death. They are grouped in Table V.

CONCLUSIONS

1. Heart disease as seen in the Pacific Northwest shows a low incidence of acute rheumatic fever (0.1 per cent), while in other localities the incidence varies from 0.1 to 0.2 per cent.

2. Hypertensive cardiovascular disease is the most frequent of all types (56 per cent).

3. Goiter, being endemic, shows an incidence of 6.1 per cent of medical patients producing cardiovascular symptoms severe enough to send the patient to the physician.

4. Hospital records, though of standard type for indexing, are entirely inadequate for statistical study as to etiologic and structural diagnosis of heart disease. They are satisfactory, however, as to incidence of cardiovascular disease as compared with total medical admissions. It is hoped that studies such as this may lead to more careful supervision of hospital records by medical boards or committees of physicians who will see to it that obsolete terms are eliminated.

5. Carefully studied patients in private practice with complete records offer a satisfactory basis for statistical study but may not give a true index as to incidence in relation to total population.

REFERENCES


5. Report of the Committee to make a study of heart disease in the State of New York, the Medical Society of the State of New York, May, 1925.