Syphilitic Aortitis and Aneurysms Found at Autopsy*

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INTRODUCTION

THE knowledge of aortic aneurysm dates back to antiquity. Galen described the condition and syphilis as a disease became known at the end of the 15th century.

The distinction between syphilitic aortitis and arteriosclerosis of the aorta was first made by Welch in 1876. He emphasized the ability of syphilitic aortitis to produce aneurysms, aortic vascular disease and cardiac enlargement. The discovery of the treponema pallidum and the Wassermann test led to confirmation and extension of the knowledge about syphilitic cardiovascular disease.

The popular press has given publicity that venereal disease is approaching an all time high in the United States. The current medical press has not been so greatly concerned with the status of the venereal disease problem. This may have led to the implication by many medical persons that syphilis had been eradicated. Such a conclusion increased the risk and diminishes the possibility that patients with the disease will get adequate therapy. The results of our study show that syphilis is a dangerous disease in the young adult and the Negro male is especially susceptible.

MATERIALS AND METHODS

A study of the autopsy records from the George W. Hubbard Hospital of Meharry Medical College covering the years 1922 through 1957 was made. Each record was carefully studied for evidence of syphilitic aortitis with or without aneurysm. The pertinent pathologic findings related to the cardiovascular system, along with the age, sex, clinical course, gross and microscopic findings, cause of death, and other pertinent data were tabulated. A total of 2,500 autopsy records were reviewed.

RESULTS

The investigation revealed 177 cases of syphilitic aortitis diagnosed from a total of 2,540 autopsies. This figure represents 7 per cent of the total autopsies performed between the years 1922 and 1957.

Aneurysms of the aorta was found in 22 of these cases representing approximately 12 per cent of the total cases.

The most frequent site of involvement was the ascending aorta, which was involved in 17 of the 22 cases with aneurysm. One interesting finding in a 26-year-old male was that syphilitic aortitis with sacculation of the aortic arch and dissection of the entire length of the aorta and portions of the illiac bifurcations. This is a rare reaction at such an early age (this was not a case of Marfan's syndrome). Syphilitic aortitis was found in a 30-year-old male who died from ruptured aneurysm of the left renal artery associated with syphilitic gummata of both kidneys. A true aneurysm of the innominate artery was found in one other case.

Ruptured aneurysm was the immediate cause of death in nine of the 22 cases of aneurysm representing 41 per cent.

The average age of cases with aneurysm was 57 years. The average age at necropsy was 55. The average heart weight of those studied was 434 grams. Eighty-eight per cent of those with syphilitic aortitis were males.

The greatest percentage of syphilitic aortitis was found in 25 per cent of all autopsies performed that year.

DISCUSSION

A review of the available literature reveals scant information on the relative frequency of syphilitic aortitis among Negroes found at necroposy. Kampmeir[1] found pathologic evidence of uncomplicated aortitis in 11.4 per cent of Negro males coming to necropsy at Charity Hospital (New Orleans). This is much higher than one would find in a

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series of white patients. This study was done in the late thirties and no noubt this percentage is much lower today. This study is the results of the occurrences of this disease in all Negro patient population.

Our figures show a 7 per cent occurrence of syphilitic aortitis between the years 1922 and 1957. A figure graphically illustrates a sharp decline of syphilitic aortitis through the years. This fall is apparently due to several factors including better health education, municipal laws requiring health cards for food handlers, the availability of free treatment, and the use of antibiotics, particularly penicillin.

Aneurysm is a stage in the progress of syphilitic aortitis. Only 12 per cent of our cases were complicated by aneurysm. Kampmeir[1] reports 36 instances of aortic aneurysm among 1,164 Negro patients at Vanderbilt University Hospital. The most frequent site was in the ascending aorta, however, other sites were found. An aneurysm of the innominate artery was found in a 62 year old female and a dissecting aneurysm of the abdominal aorta found in a 58-year-old male and a ruptured aneurysm of the left renal artery in a 30-year-old male who also had an aneurysm of the ascending aorta and syphilitic gummata of both kidneys. These are infrequent findings. The finding of a fusiform dissecting aneurysm of the thoracic aorta in a 26-year-old male is also an infrequent finding, since it is believed that aneurysm secondary to syphilis requires from 10 to 20 years. He had none of the stigmata associated with congenital syphilis. The microscopic findings confirmed the diagnosis in each case. The average age of these subjects was 55 years, which is consistent with the average age of involvement reported by other investigators. The average heart size was 434 grams, indicating some degree of cardiac enlargement present in most of the cases studied.

The great increase in syphilitic aortitis reported in 1935 cannot be scientifically accounted for; however, the steady decline of syphilitic aortitis since the advent of penicillin can be attributed to this amazing antibiotic and other factors.

Syphilitic aortitis may be fatal in complicated cases from ruptured aneurysm or aortic insufficiently leading to congestive failure. Forty-four of the 177 cases with syphilitic aortitis met death from cardiovascular lesions representing 25 per cent. Other leading causes of death were not related to the lession of syphilitic aortitis, i.e., pneumonia, uremia, etc.

SUMMARY

1. Syphilitic aortitis was a finding in seven per cent of all autopsies performed between the years 1922 through 1957.

2. Aneurysms of the aorta were found in 12 per cent of the total cases of syphilitic aortitis.

3. The ascending aorta was involved in 80 per cent of the cases with aneurysm.

4. A marked decline in syphilitic aortitis was noted during recent years.

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