

# THE DISTRIBUTION OF ULCERATIVE COLITIS AND REGIONAL ENTERITIS IN UNITED STATES VETERANS WITH PARTICULAR REFERENCE TO THE JEWISH RELIGION

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In a sample of patients, discharged from Veterans Administration Hospitals in the United States, suffering from ulcerative colitis and regional enteritis and mixed forms of these diseases, the proportion of Jews was four times as high as in a corresponding sample of general medical and surgical patients.

In the course of a study of the distribution of ulcerative colitis and regional enteritis in U.S. veterans an apparent excess of patients professing the Jewish religion was noted. In view of the differences of opinion expressed in the literature as to whether or not these diseases are unduly prevalent in Jews this point was examined in detail.

## MATERIAL

Data were obtained for all 2,320 male veterans discharged from the 174 hospitals of the Veterans Administration with a diagnosis of regional enteritis (572.0) or chronic colitis or enteritis not specified as ulcerative (572.3) from 1953 to 1957, and for ulcerative colitis (572.2) for 1956 and 1957 (World Health Organization, 1948-49). The patients were then classified according to the words used in the discharge diagnosis into five groups as seen in Table I. A detailed study of the clinical records of 81 of these patients in a related investigation (Acheson, 1960a) had demonstrated a high standard of investigation and diagnosis in the ulcerative colitis and regional enteritis groups. No further records were examined in this study.

## METHOD

The distribution of the 2,320 patients in terms of religion, race, and birth place was compared with that of a 12.5% sample of all patients discharged in October, 1956, with general medical and surgical conditions. This sample consisted of 4,072 veterans. A 25% sample of all such discharges (7,705 patients) in February, 1956, was also used to confirm the overall proportion of Jews.

## RESULTS

Table I shows that approximately four times as many Jews were found among veterans with regional enteritis and ulcerative colitis as among the sample of all discharges for general medical and surgical conditions. A similar excess of Jews was found in the group of patients suffering from enterocolitis and various combinations (mixed forms) of the two diseases. On the other hand, in the ill-defined conditions described as "chronic enteritis" and "chronic colitis" the proportion of Jews was similar to that in the control group.

The table also shows that the proportion of negroes discharged with any of the diagnoses under study except chronic enteritis was materially smaller than the proportion in the sample of all discharges. However, even when this is taken into account and the number of Jews in each diagnostic group is expressed as a proportion of all whites, the striking excess of Jews with ulcerative colitis, regional enteritis, or mixed forms remains. This excess could also be demonstrated when World War I veterans, and veterans of World War II and the Korean conflict were compared separately with the corresponding groups in the control sample. This analysis was necessary because the control group as a whole was older than the test group. It permitted comparable age groups to be studied.

As the Jewish population of the United States is concentrated in the north-eastern part of the country, it was important to determine whether the apparent excess of Jews suffering from the diseases under study was due to a localization of these diseases in the north east. A suggestion of such a

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TABLE I  
COMPARISON OF NOS. OF JEWISH PATIENTS DISCHARGED FROM VETERANS HOSPITALS WITH VARIOUS DIAGNOSES AND NOS. IN A SAMPLE OF ALL GENERAL MEDICAL AND SURGICAL DISCHARGES

	Professing Hebrew Religion			Number of White	Negroes		Total No. of Cases (All Races)
	No.	% of White	% of All Cases		No.	%	
Regional enteritis	65	9.3	8.8	698	44	5.9	742
Chronic enteritis not specified as regional	1	1.5	1.2	65	16	19.8	81
Ulcerative colitis	111	9.8	9.4	1,129	46	3.9	1,175
Chronic colitis not specified as ulcerative	3	1.5	1.4	195	16	7.6	211
Mixed forms*	9	8.6	8.1	105	6	5.4	111
Sample of general medical and surgical discharges, October, 1956	80	2.3	2.0	3,469	603	14.9	4,072

\* Ulcerative colitis and regional enteritis together; chronic enterocolitis, ulcerative colitis specified as involving the ileum; regional enteritis specified as involving the colon.

TABLE II  
PROPORTIONS OF JEWS AMONG WHITES WITH ULCERATIVE COLITIS AND REGIONAL ENTERITIS BY GEOGRAPHICAL REGION OF BIRTH COMPARED WITH PROPORTIONS IN SAMPLE OF ALL GENERAL MEDICAL AND SURGICAL DISCHARGES

Geographical Region of Birth*	Ulcerative Colitis			Regional Enteritis			Sample of All General Medical and Surgical Discharges		
	No. of Jews	% of Jews	Total Whites	No. of Jews	% of Jews	Total Whites	No. of Jews	% of Jews	Total Whites
North east	71	20.1	353	43	20.0	215	51	6.6	772
North central	20	5.3	376	11	5.9	188	3	0.3	1,006
South	3	1.2	252	2	1.0	203	3	0.2	1,209
West	3	3.2	95	0	0.0	65	1	0.5	190
Foreign born	14	26.4	53	9	33.3	27	22	7.5	292
Totals	111	9.8	1,129	65	9.3	698	80	2.3	3,469

\* As defined by the Bureau of the Census, U.S. Department of Commerce.

distribution had been found by Acheson (1960b, 1960c) in studies of the deaths attributed to these diseases in the United States. Table II gives the proportions of Jews with ulcerative colitis and regional enteritis in the four geographical regions of the country compared with the control group. The cases have been distributed by region of birth. A higher proportion of veterans with ulcerative colitis and regional enteritis are Jewish than in the control group regardless of the region of birth within the United States: this generalization extends to foreign born veterans. The single exception (patients with regional enteritis born in the west) may be due to the small numbers involved.

#### DISCUSSION OF RESULTS

The differences in the proportions of Jews with ulcerative colitis, regional enteritis, or mixed forms of these diseases as compared with a sample of all discharges of general medical and surgical cases might be explained by (1) a bias in the sample of such discharges resulting in a decrease in the proportion of Jews contained in it; (2) a tendency for Jews with ulcerative colitis or regional enteritis to seek hospital treatment in veterans' hospitals to a greater extent than those suffering from other

general medical and surgical conditions; (3) a real excess of Jewish sufferers from these conditions, or a form of the disease requiring more frequent admission to hospital in these people. In case the October general medical and surgical discharges were not representative of the period under study, a count was also taken of all Jewish patients discharged in February, 1956. The proportion of 2.2% (167 of 7,705 patients) found was almost identical to that in the October sample and disposes of the first objection. The second argument, while difficult to refute, seems highly unlikely. It therefore seems probable that the results reported here indicate either that these diseases are more prevalent or are more severe among Jews than among other whites. A certain amount of support can be obtained for the former view from the literature. Sloan, Bargin, and Gage (1950) found that 9.4% of 2,000 ulcerative colitis patients treated at the Mayo Clinic were Jewish. Paulley (1950) compared the proportion of Jewish patients with ulcerative colitis in two London hospitals with the proportion of Jews found among all patients discharged. He found twice as many Jews among the ulcerative colitis patients.

In the original description of regional enteritis by Crohn, Ginzburg, and Oppenheimer (1932), all 14 patients were Jewish. However, when reflecting

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on the developments which had occurred over the next 20 years, Crohn and Janowitz (1954) felt that "no ethnic group preponderates". Boyce (1955), in his monograph, disagrees and states that the disease is more prevalent in Jews. Van Patter, Bargaen, Dockerty, Feldman, Mayo, and Waugh (1954) reporting 600 cases from the Mayo Clinic found 153 Jews (25.5%). The figure mentioned by Ruble, Meyers, and Ashley (1957) is even higher; they found that 43 of 100 patients at the Harper Hospital were Jews. In view of the fact that neither of these institutions are Jewish foundations these figures are remarkable even in the absence of information about the ethnic structure of the overall hospital populations.

It is not known whether the apparently increased susceptibility of Jewish persons to ulcerative colitis and regional enteritis demonstrated here is due to an hereditary or an environmental influence. It would be interesting to know the relative prevalence of the diseases in Ashkenazic and Shephardic-Oriental Jews, and among those who do and do not adhere strictly to the dietary law (Kallner, 1958; Dorn, 1959).

### CONCLUSIONS

The proportion of Jews in samples of patients discharged from Veterans Administration hospitals with ulcerative colitis, regional enteritis, and mixed

forms of these diseases was about four times higher than in samples of all general medical and surgical patients.

No excess was found in the proportions of Jews with chronic colitis not specified as ulcerative, or with chronic enteritis not specified as regional.

When the cases of ulcerative colitis and regional enteritis were distributed by geographical region of birth a higher proportion of Jews with ulcerative colitis or regional enteritis than in the control group was noted in every region except one.

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