

OBSERVATIONS ON THE OCCURRENCE OF AN ETHNIC ELEMENT IN INVOLUTIONAL MELANCHOLIA.

By R. GIBSON, M.D., D.P.M.,

Assistant Medical Officer, Northumberland County Mental Hospital.

[Received February 16, 1943.]

IN the development of involutional melancholia a variety of causes have from time to time been implicated, ranging from glandular upset of ovarian or pituitary origin to the stress of air-raids. In the bulk of cases the pathogenesis would appear to depend on the interaction of a constellation of predisposing and precipitating factors. In the present study a tentative attempt has been made to indicate a possible ethnic element in the aetiology of this psychosis.

Attention has been drawn to the fact that involutional melancholia is more often seen in association with the asthenic type of physique than with other types, and this coincidence has been contrasted with the findings in manic-depressive psychosis where the pyknic variety is prevalent. In view of the frequent occurrence of this psychosis in a particular racial background, it is perhaps permitted to inquire whether an ethnic factor may not be involved.

Differing views have been expressed about the correlation of physical with racial type. The prevalence of asthenics in Northern Europe has been contrasted with the predominance of pyknics in Central Europe, and comparisons have been drawn between these types and the ethnic groups of the districts. Thus asthenic has been associated with Nordic and pyknic with Alpine, whilst the athletic type has been compared with such widely differing ethnic prototypes as, on the one hand, the Dinaric (1), and on the other, the Atlantic (2). An entirely different line has been taken by Fischer, who has pointed out the occurrence of both pyknic and asthenic constitutional types in what he believed to be homogeneous ethnic groups. In accordance with this view the same racial type will therefore have members differing in their constitutional make-up, but alike in the fundamental features distinguishing the group, such as shape of skull or colour of skin. "Hence there are asthenic Alpines, pyknic Alpines, and so on, each type clearly distinguishable from the other. But the Nordic pyknic will also be distinguishable from the Alpine" (3).

As the criteria employed to distinguish the main ethnic types encountered in Western Europe are fairly well known the following brief account, taken largely from Stibbe's and Günther's works (4), may serve to illustrate the salient characteristics:

The Mediterranean, as exemplified by a Southern Italian, exhibits a dark complexion, dark, strong, wavy hair, prominent nose, dark to black irides, long face with light lower jaw, long head, short stature and light build.

The Alpine, as exemplified by many Swiss and Southern Germans, has a complexion intermediate between dark and fair, brown coarse and profuse hair, short nose, brown irides, face broad and round, broad head, short stature and thick-set build.

The Nordic, as exemplified by a Scandinavian, such as a Swede, shows a fair complexion, light, fine, wavy hair, high narrow and prominent nose, blue irides, long face, long head, and tall stature. By some regarded as a variety of Nordic and by others as a separate group is the type variously known as Heavy Blond, Cro-Magnon, Atlantic, or Dalic. This resembles the Nordic but differs in possessing a short broad face, and in having a taller stature and heavier build. People of this group occur most frequently in Central Sweden, Westphalia and Scotland.

In a mixed population any given individual is likely to bear genes inherited from a variety of racially diverse ancestors, whilst his outward appearance, or

phenotype, may approximate to one particular racial group. Although the phenotype does not necessarily reveal the genotype or hereditary equipment, it does give a certain clue to racial membership (5). On this basis ethnic surveys have been used to ascertain the relative frequency of specific types in a mixed population, and provided it is borne in mind that such surveys concern phenotypes, their employment is unlikely to lead to such genetically unsound statements as that, for example, a brother and sister may belong to different pure races (6). The national terms English, Scottish, Irish and Welsh are cloaks for several ethnic stocks, for the most part present throughout the British Isles, but varying in proportion in different localities. Thus can be recognized people of predominantly Nordic, Mediterranean and Alpine types in all parts of the country. In addition there are small isolated groups, more particularly in Cornwall (7) and the Western Isles (8), where the Phoenicians have bequeathed to posterity their already mixed lineage of Oriental and Near Eastern races. According to the figures quoted by Günther, the proportion of main ethnic types in the population is 60 per cent. Nordic (including small Atlantic element), 30 per cent. Mediterranean, and 10 per cent. Alpine (9). The Nordic strain as a general rule is more pronounced in Scotland and the east of England, whilst the Mediterranean element is strongest in the south of Ireland. In passing, and in view of the political pseudo-scientific misuse of the term Nordic, it is interesting to note that Günther, a German of the pre-Hitler era, gives a lower estimate (50 per cent.) for the amount of Nordic stock in Germany.

In the investigation of a series of female involutional melancholics at the Northumberland County Mental Hospital, particular attention was paid to the ethnic types encountered. Over a period of 18 months 50 cases presenting the clear-cut, uncomplicated psychosis were investigated. Of these, 70 per cent. were predominantly Nordic, 8 per cent. Mediterranean, 2 per cent. Alpine, 2 per cent. Atlantic, whilst 18 per cent. were rather more mixed. A control series of 50 schizophrenics furnished 66 per cent. Nordic, 4 per cent. Mediterranean, 4 per cent. Alpine, and 26 per cent. mixed. In a further group of 30 manic-depressives there were 53 per cent. Nordic, 10 per cent. Mediterranean, 4 per cent. Alpine, and 33 per cent. mixed. On the whole, the differences between the involutional melancholic and schizophrenic groups were slight, and in view of the predominance of Nordic elements in Northumberland, these percentages might be a reflection of the geographic background from which the cases were drawn.

A feature of peculiar interest was discovered in the course of further examination. In the involutional melancholic group the presence was noted in 15 cases of a Scottish parent or grandparent, and in eight others of a corresponding Irish or Welsh ancestry. Thus 46 per cent. of the material was in this way affected. Moreover, an even greater prevalence of such strain seemed indicated by the occurrence of purely Scottish family names in six more patients whose immediate ancestry yielded no definite information. When, however, the control groups were examined, the presence of this strain could be ascertained in only 28 per cent. of the schizophrenics and 30 per cent. of the manic-depressives.

To obtain a proper perspective it is essential to consider the composition of the population from which this series has been taken. The county of Northumberland embraces a large and sparsely populated rural area, an extensive mining zone along the southern half of the coastal strip, and the industrial region on the north bank of the Tyne. Northumberland Mental Hospital draws its admissions from the entire rural and mining area and from the Tyne industrial region with the exception of the City of Newcastle. Like most border regions an admixture of peoples has taken place over many centuries. Moreover, Scottish blood has entered in increasing quantity since the Union, and as one indication of the amount of this contribution is the fact that 20 per cent. of the hospital population have Scottish names. More recently the development of the Ashington coal-fields and of the Tyne industrial basin has been a strong factor in altering the original population, and amongst others, a considerable amount of Irish and Welsh blood has been drawn to the county. Of ethnic types the Nordic is prevalent, but there has been considerable influx of other types coincident with industrialization—a factor particularly favouring Mediterranean stock (10).

Consideration of this mixed population, however, appears insufficient to account for the high proportion of Scottish ancestry in the series of involutional melancholics, and unless it is mere coincidence, which on the face of it seems unlikely, one is led

to inquire whether such a strain is predisposed to involuntional melancholia. This would seem to be the case. Henderson and Gillespie stress the prevalence of this psychosis in Scotland and quote the figures of the Royal Glasgow Mental Hospital for the period June, 1915, to December, 1919, when out of 299 admissions between the ages of 40 and 70, there were 97 showing anxiety states characteristic of the involuntional period (11).

In countries where the Mediterranean occurs in greatest purity, as in Southern Italy, involuntional melancholia is not recorded as being of especial frequency, whilst the Alpine strain would seem particularly associated with manic-depressive psychosis. As the prevailing type in Scotland is the Nordic it may be profitable to inquire into the forms of psychosis in other regions where this type is predominant, as in North-West Germany and, above all, in Sweden.

In North Germany von Verschuer pointed out the tendency of the predominantly Nordic North Germans to the schizothymic temperament associated with schizophrenia (12), whilst the material investigated by Henckel in Sweden showed that there were seven schizophrenics to every manic-depressive (13). As involuntional melancholia was not mentioned as a separate entity, presumably manic-depressive was used in a Kraepelinian sense to include the former psychosis. This is in marked contrast to Scotland, where Henderson and Gillespie have, as already mentioned, stressed the prevalence of involuntional melancholia.

It may not be without significance that the Nordic type in Sweden differs in certain respects from that in Scotland. The ethnic subtype in Sweden belongs to the Germanic wave, whilst that in Scotland includes both the Germanic and Celtic subtypes, a state of affairs also applying in Ireland. One essential difference then between the Swedish and the Scottish Nordic lies in a Celtic strain in the latter. As the two ethnic groups do not differ in their outward characteristics, one is tempted to speculate whether the occurrence here of involuntional melancholia in a type associated elsewhere with schizophrenia may not be due to the presence of a Celtic element.

Although the evidence is incomplete, there are several suggestive features in favour of a connection between the original Celtic type and involuntional melancholia. The well-known prevalence of the psychosis in Scotland has already been stressed. In the United States the Central Islip State Hospital has considered it worthy of note that although draining a population of very mixed origin, fully 25 per cent. of admissions of involuntional melancholia occurred in patients of Irish origin (14)—a factor indicative rather of genetic than of environmental causation. In Bristol an abnormally high incidence of the psychosis has been noted (15). This city is situated in one of the two counties in the South-West where the Nordic type is prevalent (16), and if Fleure's view on the survival of a Celtic strain in this population be accepted (17), there would be presumptive evidence for the operation of a genetic factor. Finally there are the findings in the present series, where the majority of cases are of Nordic type, and where a strong infusion has been shown of a strain known to be prone to involuntional melancholia.

Comparative philology locates the original home of the Nordic Celts in the valley of the upper Danube (18). The first wave, that of the Gaels, passed into Scotland and Ireland. In Scotland the type remained purer, subsequent blending being largely with the Germanic Nordics, whilst in Ireland the Mediterranean element reasserted itself to a greater extent. Conditions in Wales were rather different. The second Celtic wave, the Brythonic, formed a ruling caste over a large Mediterranean and Alpine population, and ultimately types representative of these latter groups tended to prevail (19). Of the continental Celts the type apparently remained purest in South-west Germany, and a leading authority on German ethnology was forced to admit that many a Nordic German might just as easily be of Celtic as of Germanic origin (20).

If there is a hereditary factor, then in order to be so widespread it is reasonable to presume that it arose at an early state in the development of this subtype. The genes for hereditary disease arise in the first instance by mutation (21) and spread throughout an isolate (22). Such a gene might be capable of producing a disease or only a diathesis, as in the case of acholuric jaundice (23). In the conditions under which the Celts became separated from the common stem such a mutation could have occurred and established itself in the group. The abnormality might then be linked to some particular characteristic or group of characteristics,

and individuals possessing them would thus at the same time carry the liability to the disease. Such an association between disease and phenotypic component is shown, for instance, in the connection between xeroderma pigmentosum and the type of skin (24), or between the adenoid constitution and the shape of the nose (25). In a mixed ethnic stock a recombination of characteristics would be possible in the course of generations, and thus involuntional melancholia could occur in individuals whose phenotype bore but a few of the characteristics originally associated with the disease. Where, however, the original stock persisted in a less diluted form, it would not be unreasonable to expect a greater incidence of the abnormal tendency in individuals of a phenotype originally associated with the tendency, and hence a greater incidence in a recognizable ethnic type.

SUMMARY.

The unusual frequency of Scottish ancestry in the ascendants of a series of involuntional melancholics has been commented upon, and the presence mooted of an ethnic element in the factors capable of predisposing to this psychosis.

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