

RES MEDICA

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Abstract

Heredity and social order

That medical research can be retarded by the limitations of laboratory technique is only too well known. But, once begun, research into a specialised field can advance with startling rapidity. In, the past two years, more reliable methods leading to the identification of individual chromosomes have been developed. A new dimension is being added to the science of genetics, which may provide a variety of social and clinical implications, typical of this branch of biological science.

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NOVEMBER 1960

HEREDITY AND SOCIAL ORDER

That medical research can be retarded by the limitations of laboratory technique is only too well known. But, once begun, research into a specialised field can advance with startling rapidity.

In the past two years, more reliable methods leading to the identification of individual chromosomes have been developed. A new dimension is being added to the science of genetics, which may provide a variety of of social and clinical implications, typical of this branch of biological science.

It seems that in the course of oogenesis and spermatogenesis, non-disjunction of X or Y chromosomes during meiosis or mitosis may result in the birth of individuals with abnormal genetic constitutions, e.g. XXY associated with Klinefelter's syndrome; XO associated with Turner's syndrome. Among the cases studied so far are examples of primary amentia and true hermaphroditism. More generally known is the association of mongolian idiocy with the usual complement of autosomes and sex chromosomes but with one additional small autosome.

Following a discussion of the presence of some less fortunate groups in the community, I have heard a distinguished member of our University express the following opinion with regard to mongolism; that since a definite abnormality in the genetic constitution can be demonstrated, some reasoned argument can be put forward for the disposal of such individuals. Certainly their inheritance is not that regarded as human. Nor can anyone who has seen for himself how families may devote themselves to the care of a mongol, a cretin or someone chronically insane, find it easy to oppose this argument outright.

But for which reason might a mongol be removed? Simply because of his inheritance? Or because he is a source of heartbreak? On the latter I shall comment, and with regard to the former it has not been shown that chromosome constitutions just as abnormal are incompatible with normal mental and physical development. Patients exhibiting Klinefelter's or Turner's syndrome can be of reasonably high intelligence, and to the world at large appear completely normal.

Nevertheless, when, as a result of inheritance the use of language is never gained, memory is very limited and the implications of any situation never understood, surely foresight and the very human faculty of self-awareness cannot be present.

Chromosome studies will lead to many fields remote from the original researches in leukaemia and immunology. This break-through is a reminder that the science of genetics, though specialist, has implications far beyond itself.

TRANSPLANTATION

During the last few years it has become impossible to look at medical journals and publications and fail to notice the increasing frequency of articles dealing with the problems of tissue grafts and transplantation. Skin grafting subsequent to burns and traumatic episodes and in many forms of plastic surgery is now commonplace and routine, but this has not been achieved overnight. In the early years of such techniques much research and experimentation was necessary to overcome the fundamental problems involved.

Great success has been achieved in these situations and gradually the field has been extended to cover a multiplicity of frequent clinical conditions. Autoplastic transplants of bone from one site to another to restore deficiencies due to fracture or necrosis may be quoted as examples. Successful as the great majority of these procedures are, they are limited in that the transplants must be taken from the patient himself.

Recently, in spite of great difficulties, the field has begun to cover heterologous transplants, but primary surveys indicate that results are far from satisfactory and the work is very restricted. More success has been obtained in the transfer of certain tissues and organs between closely related individuals, especially in the case of identical twins. Progress is slow, but within the past few weeks the first successful kidney grafting operation to be performed in Britain has been reported. Admittedly identical twins provide a unique situation and only certain organs can be transferred, but the experience gained in such conditions is of the greatest significance.

With these advances in mind we must look ahead to the day when organs can be freely transferred from one individual to another. If this ideal could be achieved many patients at present faced with a much reduced life expectancy due to failing and inefficient organs, would be restored and returned to a normal existence. Such a situation seems initially to be impossible or at least very far into the future, but research is striving to obtain just such a goal. It is surely not outside the bounds of reality to visualize the solution to this problem.

TIMES OF CHANGE

Three years have now passed since the first edition of RES MEDICA was published. It may be said that in that period the major teething troubles of the journal have been surmounted thanks to the zest and application of the previous editors and their committees. Our aim in producing the journal remains that of reflecting the events which have of late taken place in the Society particularly in the "Public Business" meetings.

A highlight of the latter part of the 223rd session was undoubtedly Dr E. B. French's address on "The Diagnostic Value of Pain," and it is with great pleasure that we print a digest of this address as our opening article. Also in this edition is the second part of Dr R. W. D. Turner's three-part article on "Auscultation" in which he deals with the topic of "Triple Rhythm." Much praise of the first part of this article has reached us from both postgraduate and undergraduate sources and we have no doubt that our readers will find "Triple Rhythm" at least as stimulating and instructive as its predecessor.

As a Society of about two and a quarter centuries' standing the Royal Medical Society maintains a great interest in the history of medicine, and in particular in the great names which are part of its own history. In this connection we are very grateful to Mr J. B. Wallace, past-president

of the Royal Scottish Society of Arts, for giving us the privilege of publishing an extract of his presidential address to that Society on William Cullen and Joseph Black, who were two of our famous founder members. The interest in historical studies can also be seen in the subjects of several of the dissertations given by undergraduate members in this and the previous session. Mr W. S. Uttley's article on "Sir James Mackenzie—An Introduction to Cardiology" is an example of these.

In this issue are two other articles. That of Mr G. W. K. Donaldson on "Hypertension" is based on his excellent and erudite dissertation given before the Society towards the end of last session. Dr W. L. Ford has for most of his undergraduate life been one of the stalwarts of the Society, and it was with great disappointment that we learned that he was unable to read his dissertation before the Society owing to illness. However, his talent was not lost to the Society in that we now publish his most interesting article on "Constitutional Jaundice."

Any reflection of the happenings within the Society would be incomplete without any mention of the process of revision of some of the Society's laws and customs which is now in the initial stage. This is the result of the work of Mr A. D. Chalmers and his committee and is almost certain to have far-reaching effects in the future conduct of the Society. Among the topics to be brought under review by the Society in this session are the usefulness and purpose of "First Private Business," election to office and fellowship, and the entry of women into the Society. Such topics as these are going to stimulate much thought and discussion and may be even heart-searching amongst the members of the Society. However, we believe that the outcome, in the shape of a Royal Medical Society more useful and used by the medical students of Edinburgh, will make it worthwhile.

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*a complete victory
 in what neither of
 us considered a great
 hope & I must tell
 you how grateful I
 am of your help in
 this matter.*

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 TAVISTOCK SQUARE, W.C.1

Telephone: EUSton 4244/7