ACCIDENTAL REMOVAL OF AURICLE BY MIDWIFERY FORCEPS, AND SUCCESSFUL APPLICATION OF ARTIFICIAL AURICLE.

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I AM induced to publish a note of this case by the extreme rarity of the occurrence of the accident. It is the only case of such injury of the auricle that I have seen in the course of twenty years practice of aural surgery. The practitioner who attended the delivery has kindly supplied me with the particulars of the circumstances and course of the labour:

Fig. 1.—Remaining parts of right auricle.

The presentation was a normal first position. The labour was very protracted and lingering. The woman was very atonic, no progress being made after many hours of irritating and exhausting but slight pains. Chloroform having been administered, the instruments were applied at the brim, the forceps used being a modification of Barnes's of medium length. After long and strong pulling, the forceps slipped without the slightest warning, and on reapplication the child was delivered without further incident. The case all through was extremely difficult.

The little boy was brought to me by his father about two years ago for advice as to an artificial auricle. I found that nearly the whole of the right auricle had been removed. As will be observed from the photograph (Fig. 1), the tragus alone remained along with part of the antihelix bounding the concha inferiorly and posteriorly, extending superiorly to meet a small remnant of the helix and its crest above the orifice of the external meatus, and enclosing a depression corresponding to the situation of the

cymba conchæ. The fenestra of the blade of the forceps had caught the auricle behind and below and had torn

Fig. 2. Artificial auricle with process for meatus.

it away close to its place of attachment to the temporal bone. No attempt was made to reapply the auricle by means of

Fig. 3.—Artificial auricle in position.

sutures. The external meatus and tympanic membrane were found on examination to be quite normal, and the hearing was ascertained to be unaffected.

Mr. D. R. Cameron, L.D.S., has been successful in making a very satisfactory artificial ear, which the boy has been using for the last two years. A plaster cast was first made of the left, or normal, ear, and also of the remains of the right auricle. An artificial right ear was then modelled in wax, conforming to the left as far as possible, and finally made of Yela rubber vulcanised. The artificial auricle is kept in position mainly by the insertion of the process (photograph, Fig. 2), into the external meatus of which it is a cast. For the admission of air it is perforated right through. The application of seccotine has been found quite sufficient for the necessary adhesion of the internal surface of the artificial auricle to the corresponding parts remaining. Fig. 3 shows the artificial auricle *in situ* from the side.

The boy's father has devoted much attention to the pigmentation of the auricle, and has succeeded very well in copying the colouring of the normal ear.

THEORIES OF INHERITANCE.

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It is questionable whether the ignorance of medical practitioners upon this subject is so great as Dr. Archdall Reid supposes. Certainly if they are unacquainted with his views, they have wilfully neglected the very ample opportunities with which he has furnished them.

Such names as Hunter, Virchow, Huxley, Devay, Hodgkins, Paget, and Bastian remind us that after all there may be medical men who are not wholly ignorant of the subject, and although they have written for the most part with hesitation and diffidence, it is not certain that cocksureness is the sole criterion of mastery of a subject. There are, in fact, statements in Dr. Reid's own paper which, if he were not so sure of them, I should think were open to doubt. Dr. Reid repeats in his paper, as he has repeated many times before, that acquired characters are not transmissible, and as to their transmissibility says, "It is unbelievable that this can be true." That such transmission is unbelievable to Dr. Reid we have copious evidence to show; but the statement cannot be accepted as universally true unless Dr. Reid can show that believers are as non-existent as, according to his account, are instances of transmission of acquired character. But this is certainly not the case. Plenty of people have believed in the transmission of acquired characters, and plenty of people believe in it still. And, moreover, a thing is not necessarily untrue because some people, or even most people, find it unbelievable. Were it so it would be untrue that the earth goes round the sun, that there are antipodes, and that a railway journey of thirty miles an hour could be performed without the death of the passengers. "What is the machinery," says Dr. Reid, "by which this magical process is carried out? We know of none. On the face of it, therefore, the transmission of acquirements appears wildly incredible." By a parity of reasoning the fall of a stone is wildly incredible, for we are equally ignorant of the machinery by which this magical fall is effected. We know of none.

"The human body," says Dr. Reid, "is compounded of billions of cells, but a future individual springs from only one of them, a germ. The other cells—the somatic cells—afford shelter and nutrition to the germs, but there is not a tittle of evidence that they do more. They are specialised for their several functions, just as the germ is specialised for reproduction." This is indeed a new doctrine. It has usually been considered that the power of the germ to develop into a new individual lies in the total absence of specialisation. It is because it is general in the widest sense, because its direct descendants are capable of specialisation in every normal direction, that it is a germ and can develop into an individual in the likeness of its parent. If a cell is specialised, some have hitherto believed, it can produce only specialised offspring like itself.

"Were acquired characters transmissible," says Dr. Reid,

"the child of an old man ought to be clearly distinguishable from the child of a man 40 or 50 years younger. In fact, the children of the aged should be born aged. But no medical man is able to distinguish the child of an aged couple from the offspring of a boy or girl who have (*sic*) barely reached puberty." In this declaration there seem to me to be several fallacies. If acquired characters are transmissible, a child begotten in the old age of the father, which is, I think, what Dr. Reid means by the child of an old man, ought to be different in some respects from the child begotten in the boyhood of the father. This I think we should all grant; but it does not at all follow that the difference should be clearly distinguishable. As a matter of fact, there are differences between offspring begotten in the old age and offspring begotten in the extreme youth of the parents, and although these differences are not always so pronounced as to be "clearly distinguishable," yet in extreme cases the difference is clear enough. Children begotten in the extreme youth of the parents are commonly physically puny and shortlived; children begotten in the extreme old age of the parents are commonly deficient in intelligence. This is a considerable difference, but it is not a clearly distinguishable difference.

What Dr. Reid means by the child of the aged being born aged I do not clearly understand. Does he mean that the aged child should, when it is born, have already lived as many years as its father? Or does he mean that it should be born with grey hair, arcus senilis, presbyopia, and other signs of age? If the former is his meaning, I think that he misapprehends the problem that he is dealing with. If the latter, he misapprehends the position of his opponents. I am not concerned to champion the inheritance of acquired characters, a task for which my knowledge of the subject is not adequate, but when dogmatic assertions are somewhat importunately thrust upon us, we may be allowed to examine them, and the grounds upon which they rest. Is Dr. Reid not acquainted with the doctrine of inheritance at corresponding ages, and with the acceleration and retardation of the appearance of a quality in successive generations, and is he prepared to say that the tissue changes characteristic of old age do not appear earlier in offspring begotten late in the life of the father than in offspring begotten early in the life of the father? The difference, if any, produced in a single generation would probably be so small as to be inappreciable, especially having regard to the normal variation in the time of life at which these changes appear, and to their gradual onset, which makes exact estimate of their time of occurrence impracticable; but all these considerations go to show what an extremely complex problem we have here to deal with, and how very unsafe it is to dogmatise upon it.

The doctrine of the non-transmission of acquired characters is, in my opinion, wrongly entitled. What the upholders of this doctrine really advocate is not the non-transmission of acquired characters, but the non-acquirement of transmitted characters, which is as different from the former doctrine as a horse-chestnut is from a chestnut horse. Even Dr. Reid admits the influence of use and disuse in increasing and diminishing, respectively, the size and development of a part. These effects, in a single individual, he calls acquirements, and says that they are not transmissible. But if we point to the increase in size of, for instance, the great toe, and the diminution in size of the little toe, as examples of the accumulation by inheritance of the effects of use and disuse, then we are pitied for our ignorance, and told that individuals whose organisations varied spontaneously in the direction of a larger hallux and a smaller fifth toe have been naturally selected, while those who varied in the opposite direction, or did not advance as their predecessors, have been eliminated. By the adoption of this mode of reasoning it is easy to "break down" the "hundreds, if not thousands, of instances" in which the transmission of acquired characters has been alleged.

Dr. Reid's attitude of tolerant but contemptuous superiority towards Darwin's doctrine of pangenesis is a very familiar one. I have passed through it myself, and have witnessed it in scores of others; but I am old enough to have witnessed also the effect that ten, fifteen, or twenty years of experience and meditation have upon this attitude; and among my own contemporaries I know few who do not now, as I do, blush at the remembrance of the crude condemnation that they for-