

“1st. Appearance of epilepsy in animals born of parents having been rendered epileptic by an injury to the spinal cord.

“2nd. Appearance of epilepsy also in animals born of parents having been rendered epileptic by the section of the sciatic nerve.

“3rd. A change in the shape of the ear in animals born of parents in which such a change was the effect of a division of the cervical sympathetic nerve.

“4th. Partial closure of the eyelids in animals born of parents in which that state of the eyelids had been caused either by the section of the cervical sympathetic nerve or the removal of the superior cervical ganglion.

“5th. Exophthalmia in animals born of parents in which an injury to the restiform body had produced that protrusion of the eyeball. This interesting fact I have witnessed a good many times, and I have seen the transmission of the morbid state of the eye continue through four generations. In these animals, modified by heredity, the two eyes generally protruded, although in the parents usually only one showed exophthalmia, the lesion having been made in most cases only on one of the corpora restiformia.

“6th. Hæmatoma and dry gangrene of the ears in animals born of parents in which these ear-alterations had been caused by an injury to the restiform body near the nib of the calamus.

“7th. Absence of two toes out of the three of the hind leg, and sometimes of the three, in animals whose parents had eaten up their hind-leg toes which had become anæsthetic from a section of the sciatic nerve alone, or of that nerve and also of the crural. Sometimes, instead of complete absence of the toes, only a part of one or two or three was missing in the young, although in the parent not only the toes but the whole foot was absent (partly eaten off, partly destroyed by inflammation, ulceration, or gangrene).

“8th. Appearance of various morbid states of the skin and hair of the neck and face in animals born of parents having had similar alterations in the same parts, as effects of an injury to the sciatic nerve.”

It should be especially observed that Brown-Séquard has bred during thirty years many thousand guinea-pigs from animals which had not been operated upon, and not one of these manifested the epileptic tendency. Nor has he ever seen a guinea-pig born without toes, which was not the offspring of parents which had gnawed off their own toes owing to the sciatic nerve having been divided. Of this latter fact thirteen instances were carefully recorded, and a greater number were seen; yet Brown-Séquard speaks of such cases as one of the rarer forms of inheritance. - It is a still more interesting fact -