undoubtedly have saved both mother and child. The fact that the woman was only twenty years of age, that she had borne a child without difficulty within two years, and that the tumor, being interstitial, was not so prominent as to make its nature and extent realized until powerful uterine contractions had set in, are some of the facts which led to this mistake.

Clinical Department.

NOTES FROM THE NEUROLOGICAL DEPARTMENT OF THE MASSACHUSETTS GENERAL HOSPITAL.

EXOPHTHALMIC GOITRE AND FRIGHT.

BY E. W. TAYLOR, M.D., BOSTON.

THE etiological relationship of various neuroses and fright has long been recognized, however difficult of explanation the association may be. A peculiar interest attaches to exophthalmic goitre in this connection, because of the fact that in its characteristic form it so perfectly represents the physiological appearances associated with fear. One's experience, however, by no means invariably bears out the supposition that fear is always the exciting cause of the neurosis; in fact, a sufficiently definite association of fear and subsequent symptoms to be of any scientific value is relatively unusual.

The following cases are reported as a contribution to the general subject. All 3 came under observation within a period of five weeks, 2 at the Massachusetts General Hospital and 1 privately. In each, careful inquiry disclosed no other adequate cause for the development of the disease than fright. All were in women.

CASE I. L. H., a housekeeper by occupation, of Irish birth, twenty-eight years of age, had been perfectly well up to October, 1900. Her appearance, when seen at the hospital, justified her claim to health and general nervous stability. In October she was violently frightened by being suddenly roused from sleep, and seeing a man looking in through the window, her sleeping room being on the ground floor. She was for a time wholly overcome by fear, was unable to move, and had a sensation of extreme weakness, which she described as "collapse." Typical nervous symptoms at once appeared, associated with a dread, not yet wholly overcome, of going to a window. She continued to feel unnerved and unlike her former self. She did not, however, notice the presence of a goitre. Several months later, the foregoing symptoms persisting, she was again violently frightened in a similar manner. Soon after this, she noticed an enlargement of the neck, with accompanying nervous symptoms of a marked sort. She is perfectly confident the goitre did not exist before, a matter about which it is entirely unlikely she could be in error, especially since she in no way associated the thyroid enlargement with what had gone before.

Physical examination, March 11th, showed a well marked goitre, not completely bilateral, no exophthalmus, a somewhat irregular pulse of 102, and a certain amount, though not excessive, general nervousness. The heart was normal; the knee jerks within normal limits, and the mental state not noteworthy. The patient presented the picture of an extremely mild, though undoubted exophthalmic goitre.

Improvement has been continuous since first seen, and although the goitre persists there can be no doubt that, under proper care and treatment, the condition will wholly subside.

CASE II. N. H., married woman of thirty-three, of American birth. Twelve years ago, while not in the best condition, the patient witnessed what she thought to be the drowning of her brother. She had immediately fainted on seeing the boat capsize in which her brother was, and on recovering consciousness still thought him dead, which naturally added to her fright. Immediately thereafter symptoms of marked general nervousness, with sensations of weakness, came on, which she is confident she had not had before. Two months later exophthalmus appeared, soon followed by bilateral goitre. For nine years she has been annoyed with rapid heart beat.

Physical examination now shows a perfectly typical picture of exophthalmic goitre; extreme exophthalmus, with slight Græfe's sign; goitre of moderate size, unequally bilateral; pulse 138, regular; typical fine tremor. The condition has remained practically unchanged for several years, under more or less intermittent treatment. The patient has not herself associated her disease with the fright she received at the time of her brother's accident.

CASE III. E. G., a student nurse, unmarried; twenty-eight years old; a native of Canada. She had been unusually conscientious in her work, but had been well up to the latter part of last year. In November, while nursing outside of the hospital, largely on her own responsibility, on one occasion she came into the room in which her patient was, and found her lying on the bed unconscious, and, as she thought, dead. Investigation showed that she had merely fainted as a result of some unusual physical exertion during the absence of the nurse. On recalling this occurrence, the patient distinctly remembers the violent fright into which she was thrown, though here again she did not herself associate the fright with her subsequent symptoms. She went on with her work, and a few weeks later, in December, had another difficult case, resulting in the death of the patient. Symptoms of general nervousness came on, tremor, poor appetite, and difficulty in doing her work. Seen a little later she presented unequivocal signs of exophthalmic goitre: loud, somewhat irregular heart beat; pulse 140; considerable exophthalmus; evident but not large goitre; general tremor; and much appearance of nervousness.

In each of these cases the association of a definite violent emotional disturbance, with the symptoms which came on immediately subsequently, is

too close to be disregarded. The fact of mere coincidence is, of course, never to be dogmatically denied, but it is certainly no straining of a point to maintain the decided probability of cause and effect. Some unknown predisposition, as in all other diseases, must be assumed; but the exciting cause, reasonably enough, may be regarded as the fright. No doubt a more careful investigation than is often made, of the immediate antecedents of the neurosis, would show an emotional disturbance as its precursor in a considerable number of cases. The manner of development of this perfectly characteristic disorder from such a cause is naturally, as yet, quite beyond our power of comprehension. If clinical experience bears out the etiological relationship it must none the less be accepted and seriously regarded, even though our knowledge as yet be purely empirical. The important part is the recognition of the possibility of the deleterious effects on the nervous system of physical traumata. There has been dispute enough about the matter in its practical bearings with relation to the recovery of damages in accident cases. One recalls a somewhat recent ruling denying damages to a plaintiff who has not received a physical injury. However practically useful such a general decision may be from a legal standpoint, in dealing with accident cases, it clearly has no medical justification. Every one who has followed the subject, is aware that in very many cases the original physical injury plays a small part in the ultimately developed neurosis. The physical effect in these disorders is by far the most important element to be considered. If courts can rule that physical contact is essential to establish a case, they must also rule that a neurosis like exophthalmic goitre, about the identity and reality of which there is, and can be, no question, should not be admitted to litigation if its apparent cause is attributable only to violent emotion. From every point of view it is desirable that cases should be reported to the end that more light may be thrown upon a problem, which is of the most intimate concern, not only to the physician, but to the public at large.

Medical Progress.

REPORT ON PROGRESS OF SURGERY.

BY HERBERT L. BURRELL, M.D., AND H. W. CUSHING, M.D., BOSTON.

REPORT OF THE COMMITTEE OF THE AMERICAN SURGICAL ASSOCIATION ON THE MEDICO-LEGAL RELATIONS OF THE X-RAYS.

DR. J. WILLIAM WHITE presented a report on the medico-legal relations of the x-rays at a meeting of the American Surgical Association in May, 1900,¹ and offered the following conclusions:

(1) The routine employment of the x-ray in cases of fracture is not at present of sufficient definite advantage to justify the teaching that it should be used in every case. If the surgeon is

in doubt as to his diagnosis, he should make use of this as of every other available means to add to his knowledge of the case, but even then he should not forget the grave possibilities of misinterpretation. There is evidence that in competent hands plates may be made that will fail to reveal the presence of existing fractures or will appear to show a fracture that does not exist.

(2) In the regions of the base of the skull, the spine, the pelvis and the hip, the x-ray results have not as yet been thoroughly satisfactory, although good skiagraphs have been made of lesions in the last three localities. On account of the rarity of such skiagraphs of these parts, special caution should be observed when they are procured in basing upon x-ray testimony any important diagnosis or line of treatment.

(3) As to questions of deformity, skiagraphs alone, without expert surgical interpretation, are generally useless and frequently misleading. The appearance of deformity may be produced in any normal bone, and existing deformity may be grossly exaggerated.

(4) It is not possible to distinguish after recent fractures between cases in which perfectly satisfactory callus has formed, and cases which will go on to non-union. Neither can fibrous union be distinguished from union by callus in which lime salts have not yet been deposited. There is abundant evidence to show that the use of the x-ray in these cases should be regarded as merely the adjunct to other surgical methods, and that its testimony is especially fallible.

(5) The evidence as to x-ray burns seems to show that in the majority of cases they are easily and certainly preventable. The essential cause is still a matter of dispute. It seems not unlikely, when the strange susceptibilities due to idiosyncrasy are remembered, that in a small number of cases it may make a given individual especially liable to this form of injury.

(6) In the recognition of foreign bodies, the skiagraph is of the very greatest value; in their localization it has occasionally failed. The mistakes recorded in the former case should easily have been avoided; in the latter they are becoming less and less frequent, and by the employment of accurate mathematical methods, can probably in time be eliminated. In the meanwhile, however, the surgeon who bases an important operation on the localization of a foreign body buried in the tissues, should remember the possibility of error that still exists.

(7) It has not seemed worth while to attempt a review of the situation from a strictly legal standpoint. It would vary in different States and with different judges to interpret the law. The evidence shows, however, that in many places and under many differing circumstances the skiagraph will undoubtedly be a factor in medico-legal cases.

(8) The technicalities of its production, the manipulation of the apparatus, etc., are already in the hands of specialists, and with that subject, also, it has not seemed worth while to deal. But it is earnestly recommended that the surgeon

¹ American Journal of the Medical Sciences, July, 1900.