simply an affection of the memory, the other faculties remaining intact? M. Littré has defined double consciousness as a state in which the patient, whether with the sensation that he is double or without it, has two states of existence, in each of which he is without recollection or knowledge of the other state. Clearly Felida is not such a case, possessing in one of her states of existence the recollection of both lives. Neither is her condition analogous to somnambulism, natural or artificial, nor to the states induced by alcohol, hachisch, belladonna, or opium, and it is easy to conceive how the misery resulting from the loss of memory may result in the depression which characterises the first of her conditions.

If it is right to ascribe all the phenomena of the disease to a periodic loss of memory, then all these phenomena point to the faculty of memory being localised in some one part of the brain. The amnesia is probably due to a temporary or periodic contraction of the vessels distributed to that part where memory is localised, and this contraction may be regarded as dependent on the hysteria from which the patient suffers.

On the Difficulty of Speech in General Paralysis.

After proposing the term "Dysphasia" as a substitute for the usual "difficulty of speech," M. Gallopain proceeds to investigate the seat of the lesion. He adopts the theory that the dysphasia is due to the lingual and labial ataxy, which in their turn result from a lesion of the ganglia in the floor of the fourth ventricle, and more particularly of those from which the hypoglossal and facial nerves take their origin.

Pathological Anatomy.—In every one of sixteen examinations lesions were found in the floor of the fourth ventricle, affecting the membrane, the vessels, and the nervous substance. The membrane which covers the floor is spread over with granulations, more or less apparent, in one case amounting to papillæ. These are formed of connective tissue, and are found in diseases other than general paralysis. The walls of the vessels are thickened, and minute hæmorrhages are occasionally found between the white and grey layers of the floor of the ventricle, while the vascularity generally is increased. The grey matter is nearly always more or less softened and semi-transparent, sometimes gelatinous in consistence, and of a light yellow colour. Microscopically, in the fresh state it is found to contain finely granular amorphous matter, isolated fatty particles, altered blood corpuscles, but chiefly cells of various sizes, round or oval, with homogeneous contents. In the nuclei of the facial and hypoglossal nerves some cells are seen with their nuclei, nucleoli, and processes, but nearly all have lost their shape and are altered in colour. The white substance beneath is generally found softened, but in one case it was hardened.

Labial Ataxy.—In a patient suffering from this affection, any movement of the affected parts, of a determined direction and

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extent, is preceded and still more followed by involuntary movements, having the same direction but generally of less extent. The involuntary movements are the more pronounced, as the extent and rapidity of the voluntary movements are increased. Thus patients have more difficulty in uttering a consonant than a vowel. During the first period of the disease fibrillar contractions are observed during unusually extensive movements, but gradually become more common, and are accompanied by repetition of the movements. In the early part of the second stage the fibrillar contractions become rare and repetition of the movements common. As a rule the patient becomes conscious of these movements, and attempts to limit them by keeping the jaws very close while speaking. In the middle of the second stage the upper lip hangs a little, and the patient appears to fear to use it, while towards the end of this stage paralysis becomes more marked, often affecting one side more than the other. In the third stage the movements of repetition for the most part disappear, and fibrillar contractions take their place.

Glossal Ataxy.—The disorders of movement in the tongue resemble those of the lips, and may or may not accompany them. Great difficulty in protruding the tongue is observed in two-thirds of the cases.

Dysphasia.—The following changes may be observed in the speech of General Paralytics: 1. Incomplete pronunciation of a syllable. 2. A syllable is omitted from a word. 3. Incomplete repetition of a syllable. 4. One or more complete repetitions of a syllable. 5. Arrest of speech occurring suddenly at the moment of utterance. 6. Hesitation of speech. 7. Extreme and uniform slowness of speech. 8. Dumbness. Of these, the first four are readily accounted for, by recalling the alterations of function arising from the labial ataxy. Hesitancy of speech is a more complex phenomenon resulting from a sustained action of the will and intelligence. Feeling that the repetition of the movements required for the syllable just uttered prevent his uttering the next, he dwells on the vowel until he is able to proceed. In these circumstances, slowness of speech is also observed. In some cases the co-ordinate movements are repeated completely and indefinitely, and then speech becomes impossible, and the patient, wearied of the attempt, remains silent. Dumbness may also be due to very advanced paralysis of the lips and tongue, and when present during and after congestive attacks probably arises from compression of the parts whence the facial and hypoglossal nerves spring.

Diagnosis.—The morbid phenomena already described are pathognomonic of general paralysis. In stammering there are disorders of respiration, which are not observed in general paralysis. The stammer is due either to convulsive arrest, or convulsive repetition of a syllable, while dysphasia presents eight different forms. In hemiplegia with difficulty of speech, dysphasia is absent, while the tongue is always drawn to one side, a rare occurrence in general paralysis.

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In cerebral softening, after the loss of a greater or less number of teeth, and in organic disease of the tongue, a thickening of speech occurs, which does not, however, at all resemble dysphasia. In stuttering, speech is too rapid, in dysphasia it is slow. In the difficulty of speech which sometimes accompanies chorea, there is some resemblance to dysphasia, but in chorea the ataxy may be observed during repose of the parts, while in general paralysis it only accompanies voluntary movements. The trembling of the lips seen in anger, indignation, and fear, disappears when the patient becomes calm. In multiple cerebral sclerosis the difficulty of speech closely resembles that of general paralysis, and the other symptoms presented must determine the diagnosis. When a patient maintains absolute silence, the characteristic trembling of the lips may be observed, if the face is made to assume the expression of suffering.

Conclusions.—In general paralysis there are always lesions of the floor of the fourth ventricle, consisting chiefly of proliferation of the cells of the interstitial tissue, leading to destruction of the higher elements, notably of the cells of the grey matter of the nuclei of the facial and hypoglossal nerves.

These lesions manifest themselves symptomatically by labial and lingual ataxy, that is, any movement of determined extent and direction is preceded, and, still more, followed by a series of movements in the same direction but of less extent.

The repetition of movements direct and opposed, which precede and follow a given movement, varies with the extent and rapidity of that movement.

Dysphasia is the natural and necessary result of the labial and lingual ataxy.

Dysphasia may be manifested in the eight forms already enumerated.

The general paralytic tries to lessen the dysphasia by speaking slowly and closing his jaws.

The intimate connection between the labial and glossal ataxy and dysphasia stamps the latter as altogether peculiar to and pathognomonic of general paralysis.

On General Paralysis as a Predisposing Cause of Fractures.

René R., an advanced general paralytic, fifty years of age, while walking in the airing-court, fell on his right shoulder and fractured his humerus. Five days later he died, and on post-mortem examination, in addition to a long oblique fracture of the shaft of the bone, three fissures, more or less gaping, were detected. Microscopic examination of the bones revealed proliferation of the fatty elements in the medullary, spongy and hard portions. The denser portions were often much thinned, and from all parts a fatty oozing might be observed.

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