with impulsion of the tongue against the lower teeth. It is only during this full nervous period that the frænal ulcer is developed. The time of its appearance, so far from being fixed and early, is necessarily slow and variable—always following, and never preceding the paroxysmal stage.

As to the mechanism of its production, there is no preceding vesicle or pustule present, as represented by some writers. Prior to the ulcer appearing, Prof. Roger has often observed at the frænum, and especially at its lower insertion a somewhat vivid redness, and then an erosion, or a linear division of the mucous membrane, with an appearance of granulations. At the point of section of the frænum there is sometimes seen a transverse depression, and sometimes a kind of pimple (*bouton*), or a yellow or white patch, often of a pearly aspect, two or three millimetres in size. At other times there is a small, median, oval ulcer, with irregular edges, and a pale or reddish-grey base. The lesion may remain in this state, while in other cases it may extend some millimetres beyond each side of the frænum, becoming also deeper, as if burrowing under the tongue. The ulcer is generally covered with a whitish or grayish exudation, not diphtheritic in its appearance, but resembling the exudations which cover the irregular ulcerations mechanically produced inside the cheeks and lips by the projection of irregular teeth or their fragments. The origin of the ulcer is purely mechanical; the tongue being in its hypercœmic state thrust forwards during the paroxysms of coughing, the frænum is easily cut by the sharp lower incisors—the lesion prevailing in a precise ratio with the severity of the cough. The ulceration occurs more readily in infants of ten or twelve months than in older children, because in the latter, when the first dentition is completed, the tongue is supported on the entire range of teeth, and is much less liable to injury than when it is only projected against the incisors, which are sometimes divided on their edges into points as sharp as needles, lacerating the tongue, and dividing the frænum like a knife. When the disposition of the teeth is anomalous, the other parts of the tongue may be lacerated; and, on the other hand, when the frænum is short, so as to prevent its protrusion, no ulceration at all will be observed. So, in infants attacked by pertussis before dentition, no ulceration is ever observed; nor is it met with in the pertussis of adults, in whom the edges of the teeth are much less sharp, and who do not project their tongues during the paroxysms.

As to the semeiotic value of the ulceration, it is not without its importance, inasmuch as the cough of pertussis is the only one that is violent enough to propel the tongue against the teeth. Prof. Roger has never met with it in any other affection, and wherever its presence is positively proved, pertussis may be diagnosed. Of course, in the great majority of cases, the paroxysms themselves have sufficiently declared the nature of the disease before the ulceration has made its appearance. But still there are certain cases in which the cough, not having as yet assumed a sufficiently special character, the practitioner may hesitate at deciding whether he has to do with a paroxysmal bronchitis or with the true paroxysms of pertussis. He should then examine the tongue (which is not always an easy matter, and requires both care and patience in very young infants), and if he finds this lesion of the frænum, and at the same time a prominence of the corresponding teeth, he may rest assured as to the nature of the case. Sometimes it is an observant mother who first draws attention tothe lesion in question.—*Med. Times and Gazette*, Oct. 5, 1878.

THERAPEUTIC RESULTS WITH PILOCARPIN.

The results of recent investigations are here summed up. Dr. Demme, of Berlin (London *Medical Record*), arrives at the following conclusions:

1. Pilocarpin is an effective diaphoretic and sialagogue in childhood.

2. It is borne very well, in appropriate doses, even by children of very tender years.

3. Unfavorable after symptoms are but rarely observed, and, probably, may be altogether prevented by the administration of small doses of brandy before the injection.

4. The conditions in which it is chiefly indicated are the parenchymatous inflammations of the kidney, with dropsy, following scarlatina.

5. Pilocarpin does not appear to exercise an influence on the heart's action.

The *Hospital Gazette* states that an important physiological effect of pilocarpin, according to Dr. Zielewicz, of Posen, is its power to reduce animal heat. He has observed a decrease of temperature amounting to as much as 2, 2½, and even 3 degrees, averaging, however, 1 to 1½ degrees. In very few instances there was a slight increase of the temperature. Again, it seems doubtful to me whether the diminution of the temperature can be attributed primarily to the action of pilocarpin, or whether it is not due to, and only temporarily caused by, the evaporation of the perspiration. Zielewicz arrives at the following conclusions:

1. Pilocarpin is a reliable diaphoretic in the diseases of children.

2. The unpleasant symptoms which occasionally follow the administration of this remedy interfere with its more general use.

3. To eliminate or diminish these complications the following rules should be observed:

a. The dose of pilocarpin should be as small as possible.

b. A small amount of morphia should be administered with the pilocarpin, best in the proportion