

Still more remarkable is the difference of the reactions of the various fluids found on *mucous membranes*, giving rise to considerable chance of error. Throughout their whole extent they furnish, like the skin, an acid principle, which exists in the transparent fluid, destitute of globules, which they normally separate from the blood; but when this fluid is replaced by one of an opaque appearance and containing globules, secreted under the influence of acute or chronic inflammation, the reaction becomes decidedly alkaline. Few animal fluids are so strongly alkaline as that furnished in coryza; and in bronchitis the acid and alkaline are not unfrequently found together, and yet remaining quite distinct in their transparent and opaque forms. The mucous membrane of the *mouth and tongue*, too, offers varieties of conditions. Examined in the morning, before food is taken, in the vast majority of cases, the fluid covering it is acid, but examined later in the day this is found to be alkaline. In the first case, it is due to the presence of the mucus; in the latter to that of the saliva. The acidity of the mouth is then no indication of a morbid condition of the stomach, occurring as it does in the healthiest persons, and in every variety of disease, and being distinct in proportion to the length of time food has been abstained from, and the secretion of the salivary glands has remained unexcited. The mucous membrane of the *stomach*, examined after death, generally furnishes an acid, sometimes a neutral, but never an alkaline reaction; and this whether it yet contains the remains of food, or whether digestion has been long suspended. How are we to reconcile this with the results of experiments which declare the fluids of the organ to be alkaline, save when stimulated by the presence of food or foreign bodies? This is not the case in *man*; for in the most opposite forms of disease the author has found acidity; and the great majority of matters rejected during life manifest the acid reaction. It is not rare to find this also in the duodenum and upper portions of small intestine; although these are often rendered alkaline by the arrival of the fluids from the liver and pancreas. Throughout the large intestine there is always marked alkalinity. The *tears and saliva* have always been found by M. Andral alkaline; and he believes that when this latter fluid has been said to be otherwise, that of the mucous membrane has been mistaken for it. Thus, in the very cases furnishing an acid reaction, if we, by means of a rapid body, excite the flow of the saliva, we immediately find this alkaline. "And thus falls to the ground one of the principal arguments which has been adduced in support of the theory which regards glucosuria as resulting from the acidification of the blood or other humours of the economy."

In a state of health, *urine* which has not remained too long in the bladder, and is examined soon after voiding, is always acid, although such acidity may become much enfeebled, or even neutralized, if very abundant drinks be taken without corresponding diaphoresis. Circumstances may render the urine temporarily alkaline, as the taking of alkalies, or the prolonged use of exclusively herbivorous aliment. The privation of food, however long, does not remove the acidity of the urine; but it is a curious fact, that in some convalescents we find the urine become temporarily alkaline when they commence a better diet. Nor does disease render the urine alkaline. Multiplied as have been the author's observations upon this point, he has never met with a case in which the urine, from the influence of the disease itself, left the kidneys in an alkaline state; and he feels convinced that the statements which have been made to the contrary are founded in error. It has been said that diseases of the spinal marrow have this effect; but, in fact, the urine never becomes alkaline in these, until the mucous membrane of the bladder is diseased. It is not then an alteration of secretion, but a purely chemical one; the urine becoming decomposed and ammoniacal, from coming in con-

tact with pus and other morbid products. *Pus*, whatever its source, is always alkaline, consisting as it does of the serum of the blood, amidst which special globules are developed; and this, as well as other morbid secretions, never becomes acid, except after long exposure to the air.

The immutability of the secretion of the acid and alkaline principles of the animal fluids is then a law of both their physiological and pathological conditions; and it must be a very important one, seeing that it persists without any exception, save one of a very temporary character, in respect to the influence of alimentary substances in the urine.—*Brit. and For. Med.-Chirurg. Rev.*, October, 1848, from *Gaz. Medica*, 1848, No. 28.

SURGERY.

Impaction of a Halfpenny in the Pharynx for Eight Months.

—A boy, aged one year and eight months, came under Dr. Ward's care, June 23rd, when his breathing was so loud and stridulous that it resounded through the hall in which he was waiting. As soon as Dr. Ward saw him, the child began to cry so convulsively, and was seized with such violent coughing, that a close examination of his throat was impossible. He was pale and emaciated, and seemed decidedly phthisical. The glands of the neck were somewhat enlarged, and the chest sounded well on percussion. His mother observed that he was quite well and hearty till March 3rd, when she supposed he swallowed a halfpenny with which he was playing, as he began to choke immediately, and the coin could not be found afterwards, and from that moment his breath became stridulous. She was then in Coventry barracks, and she took him to the regimental surgeon, who, thinking it an attack of irritation from teething, merely gave him some castor oil. At this time, besides the dyspnoea, he was constantly dribbling a thick mucus, and he could only suck one mouthful of milk at a time, being forced to withdraw from the breast with each effort of swallowing. The mucus was so profuse as almost to choke him; and these symptoms, with an increasing cough, continued for three months, till a short time before he came under Dr. Ward's care, when the dribbling had almost ceased. The mother next took him to the Coventry Hospital, where the case was again considered to be larviginismus from teething, and was treated accordingly. Dr. Ward concluded that the bronchial glands were affected with tuberculosis, as well as those of the neck, and, pressing on the recurrent, were causing the stridulous breathing. He therefore prescribed an iodine liniment, and the syrup of iodide of iron. Under this treatment the child rapidly improved, with occasional relapses, and thus seemed to confirm his diagnosis, when, on October 25th, his mother brought him, looking comparatively well, and produced the halfpenny, which she said he had taken out of his mouth and put into his father's hand after a severe fit of coughing, the day before. There is now, however, considerable hoarseness, when he cries or coughs, the latter symptom not having ceased with the cause. The coin was much worn and corroded, and covered with a layer of dried mucus.—*London Pathological Society in Medical Gazette.*

Employment of Collodion in Fistulous Openings.—Dr. Yvonneau, of Blois, relates the following case:—A little girl, five years old, was brought to me, whose right cheek was totally perforated very near the commissure of the lips, in consequence of an abscess which had burst externally, and which had, very neglectfully, not been opened early within the mouth. Both the upper and the lower jaw were attacked by caries, and the cheek had formed adhesions with the gums. The pert had the shape of a funnel, the apex formed by a fistulous opening, about half an inch in diameter, through which the saliva and the liquid taken into the mouth were dribbling. The continual loss of saliva gave the child an inordinate appetite, in spite of which it was wasting very much. The breath was also extremely fetid. I operated on the 11th of Oct., in the following manner:—After having rendered the child insensible by chloroform, freed the adhesions, and removed a portion of the lower jaw which was detached, I then included the fistulous opening in two semicircular incisions, and brought the lips of the