evidence of the disease beyond one small circular crust on one teat about the size of a split pea, which certainly would not have been recognised as cow-pox had it not exactly resembled in colour and configuration the pocks of the first animal. Taking into consideration the appearance of the crust and the circumstances of the case, it is very probable that both animals contracted the disease at the same time and from the same source.

From the descriptions of this disease, as given by various authors, bovine variola differs considerably in regard to its local phenomena, and the diagnosis is by no means easy. Bousquet, in his *Nouveau Traité de la Vaccine*, writes:

Not only do the general symptoms present no fixed type, but the local appearances themselves constantly vary, the disease always being the same; in the first place, the shape of the pustules is not always round, some are oval, others elongated; the former are flat and depressed, the latter globular, conical, etc. As regards the colour, some are white, others of a transparent or slaty white, while others again are yellowish, copper coloured, etc. It all depends even upon the colour of the teats. The areola may be present or not, the shade of the skin preventing us sometimes from distinguishing it. In short, not only are there differences in the characters described of the development, shape, nature, and progress of the pustule, but there is nothing which absolutely indicates true cow-pox, and nothing which excludes it. According to Verheyer, there is only one infallible means of diagnosing it, and that is by its anatomical structure.

Fleming also mentions this variable colour of the vaccinal pustules. In a series of articles in the *Veterinary Journal* he says:

If the skin is fine and white the varioles have a silvery white, bluish white, or slaty hue; if it is thin but dark coloured they are leaden grey; if the hair is of a bright shade they have a colour varying from a bright red to a pale or blood red tint, but always wear a metallic lustre. On a thick, white, and wrinkled skin they have a dull opaline lustre.

To further convince myself of the correct diagnosis of this rare disease, I prevailed upon G. S., after repeated refusals, to consent to be revaccinated. Dr. Hime kindly sent me some reliable calf lymph for the purpose, and vaccination was attempted in four places, not one of which showed more than the slight topical irritation one might have expected.

As to the exceeding rarity of this disease, it is probable that many cases may crop up which are never brought to the notice of veterinary surgeons or medical men, and consequently escape being recorded. Bovine variola not being scheduled in the Contagious Diseases (Animals) Act, it is only natural that cowkeepers and dairymen, not wishing their trade to be seriously affected, should keep the knowledge of the disease existing among their cattle to themselves; and where a limited number of cows are kept and only one or two men employed to do the milking, the chances of confirmatory proof by casual inoculation are reduced to such an extent, especially when the primary disease is mild in character as in the case of the second cow, that no one may have the remotest idea of its existence.

A BREAD SUBSTITUTE FOR DIABETIC PATIENTS.

By R. T. WILLIAMSON, M.D. LOND., M.R.C.P.,

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WHILST making trials of a number of diabetic biscuits,¹ I had one prepared which I think will be useful, especially in hospital practice and for poor patients. These biscuits consist of a combination of aleuronat and cocoa-nut powder. Aleuronat is a flour (a yellowish powder) which contains 80 to 90 per cent. of vegetable albumen and only 7 per cent. of carbohydrates. It has been strongly recommended by Professor Ebstein for diabetic patients. The preparation of diabetic food from aleuronat presents considerable difficulties, however. In order to use it for diabetic bread it is necessary to add a considerable amount of ordinary starch-containing flour, and the value of such bread is greatly diminished thereby. I find, however, that, by a simple combination of aleuronat and desiccated cocoa-nut powder, cakes can be very easily prepared. Cocoa nut contains a large percentage of fatty matter (70 per cent.); a small quantity of sugar is also present, but this can be almost entirely removed by fermentation.

¹ Especially those recommended by Ebstein and Saundby; *Deutsche med. Woch.*, No. 19, 1892; *Med. Chron.*, September, 1892; *Birm. Med. Jour.*, No. 5, 1893.

For the preparation of these cakes, 2 ounces of desiccated cocoa-nut powder are mixed with a little water containing a small quantity of German yeast. The mass is then formed into a kind of paste, and this is kept for half an hour or longer in a warm place. The small amount of sugar contained in the cocoa nut is almost entirely decomposed by the fermentation produced by the yeast, and the cocoa-nut paste becomes spongy. Two ounces of aleuronat, one egg beaten up, and a small quantity of water, in which a little saccharin has been dissolved, are now added to the cocoa nut, and the whole well mixed until a dough is formed. This is divided into cakes, which are baked in a moderate oven for twenty or thirty minutes.

Messrs. Callard and Co., of Regent Street, have kindly supplied me with a desiccated cocoa-nut powder, from which the small amount of sugar has been almost entirely removed. If this be employed then the addition of the yeast is not necessary; 2 ounces of aleuronat, 2 ounces of cocoa nut, 1 egg (beaten up), and a little water sweetened with saccharin are simply mixed together, divided into cakes, and baked. The cakes are most palatable when newly made. If they have been prepared more than twenty-four hours, the taste is greatly improved if they are slightly warmed before the fire. They are also improved by being buttered. The advantages of these cakes are: 1. A diabetic patient can have them easily prepared at his own home. 2. If so prepared, they are cheap in comparison with most diabetic foods (aleuronat can be obtained from R. Hundhausen, Hamm, Westphalia, Germany, in parcels containing 4½ kilos. for 7s., that is, about 9½d. per lb.; fine desiccated cocoa-nut powder is supplied by Messrs. Lyon and Sons, 4, Bath Passage, Birmingham, in tins containing 112 to 130 lbs. at 4½d. per lb.). 3. They are much more palatable than most diabetic cakes; to many persons they are very palatable. 4. They contain a large quantity of vegetable albumen and fatty matter, and only a very small amount of carbohydrate. A solution of iodine gives no blue coloration with the cakes, and hence the starchy matter must be very small or practically absent. I think these cakes will be found useful as a bread substitute, especially for those diabetic patients whose diet ought to be rigid, that is, for cases of the milder forms of the disease. When given to diabetic patients in place of ordinary bread, of course a great diminution of the quantity of sugar excreted in the urine is observed.²

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

HICCUGH FOR SEVEN MONTHS.

A CASE of hiccough of the above-mentioned duration, coming on in violent paroxysms, is now being treated in the hospital of S. Maria Nuova at Florence.

T. D., aged 44, a single woman, was admitted on January 27th, 1895. Her family history was good. She was backward, and could scarcely articulate till 5 years of age. Menstruation began at 17: it was nearly always regular but scanty; her general health was good. At 20 she had a fright from her bed catching fire, followed by fever for four or five days. About this time she was seized by a violent pain in the stomach which lasted three days, and left an uneasy sensation of tightness and distension aggravated by taking food. Later on, until the age of 37, she suffered from general weakness. There was no vomiting, acidity, or eructation, only occasionally a slight pyrosis. Seven years ago she was, as cook, exposed to great heat, and experienced severe pain in the left side of the abdomen, complicated with diarrhoea lasting sixteen months. She passed four or five mucous watery dejections daily; this was followed by excessive general weakness, on which an attack of malaria supervened.

At the beginning of August, 1894, apparently coincident with mental worry, she was seized with frequent eructations.

² Messrs. Callard and Co., of Regent Street, London, and their Manchester agents, Messrs. Mottershead and Co., have undertaken to supply these cakes to anyone who may require them ready made.