

the patient about three weeks ago. She has vision still about 6/9, the same scotomata, and about four weeks ago showed some acetone. At the last visit she showed none. The question in the case is the exact cause of this low-grade toxemia.

DR. LEE MASTEN FRANCIS, Buffalo: I want to emphasize the fact that the only thing we could find in these cases was the presence of acetone. Whether it or some parent body was the cause of the lowered vision, or whether it was a psychosis, I am sure I do not know. I thought at first it might be on a hysterical basis, possibly, especially in one case, but careful study by competent observers failed to reveal corroborative evidences of hysteria. I simply report the cases for what they are. Acetonuria was the only finding we could determine in both instances.

A METHOD OF CLOSING PERFORATIONS OF THE SEPTUM OF THE NOSE

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During the last two or three years, I have adopted the method of inserting a piece of cartilage or bone between the flaps of the mucous membrane after the submucous operation is made in cases in which it seemed to me that there might be a permanent perforation due to a tear in the mucous membrane on both sides of the septum. It occurred to me that in those cases in which there is a perforation of the septum that is not too large, a submucous operation with a transplantation of cartilage or bone or both to that part of the nose in which there is a perforation, together with the arranging and sewing of the flaps, could be carried out with good results. I have adopted this procedure in a few cases with very gratifying results. This cartilage or bone gives a support and a place for attachment for the flap of mucous membrane and this does away with retraction which is so liable to occur without some support. Before I tried this procedure my results in closure of perforations of the septum were almost invariably bad.

It seems to me that the primary incision should be at the anterior end of the cartilage of the septum so that as large a flap as possible anterior to the perforation can be obtained. Instead of cutting through the cartilage when beginning the elevation of the mucous membrane on the opposite side to the incision, it is better to begin the elevation just at the anterior end of the cartilage. One should be as careful as possible in elevating the mucous membrane around the edges of the perforation, as it is only with the greatest care that tears in the mucous membrane are prevented.

After the elevation of the mucous membrane is completed, the cartilage or bone, both anterior and posterior to the perforation, are resected and placed in a normal saline solution. As a general rule the large piece for transplanting would be taken posteriorly to the perforation. The larger the piece the better. If one thinks that a large suitable piece of cartilage or bone will be difficult or impossible to obtain, it is a good plan to transplant from another deflected septum on which a submucous operation is being made. If one uses such a method as Hazletine's, the anterior flap which is to be displaced posteriorly should be on the side of the primary incision, and the flap to be brought forward would be on the opposite side. Of course, the edges of the perforation should be pared. After the flaps have been arranged, the largest possible piece of cartilage or bone should be placed between the flaps, and the stitches applied.

One may find it better at times to insert the transplant before cutting and arranging the flaps.

After the stitches are applied, the packing of both sides of the nose is done with more care than is usually necessary after an ordinary submucous operation. The packing should be kept in two or three days. After the packing is left off a small amount of cotton may be applied over the flaps to keep them from being dried. Ointments also may be used with advantage to prevent drying of the flaps. Some variation at times in making the incision, flaps, etc., would be necessary, depending on the position, size, etc., of the perforation, but the all-important thing is to get a large piece of cartilage or bone or both anterior or posterior to the perforation and transplant this segment so that this whole area is filled in by the transplanted cartilage or bone; if possible, this transplant should be covered with mucous membrane on both sides. If only partially covered, of course, this transplant will become covered with granulations and later by epithelium and a good final result obtained; but of course this would prolong the after-treatments.

I present this procedure, thinking that it might be of assistance to some one in this obstinate class of cases.

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SUPPOSED POISONOUS PROPERTIES OF CHESTNUTS GROWN ON TREES AFFECTED WITH CHEST- NUT BLIGHT

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In October, 1913, there were a large number of newspaper reports that chestnuts collected from trees affected with the blight had poisonous properties and were producing cases of disease and death. These cases were reported from the vicinity of Hartford, Conn., from both western and eastern Massachusetts, and one case each from New Hampshire and New Jersey. One news item was to the effect that in Framingham, Westboro and the surrounding towns of eastern Massachusetts there was an epidemic resulting from eating these chestnuts. A report from western Massachusetts stated that gray squirrels were dying, presumably from eating chestnuts from these blighted trees.

The matter was deemed of sufficient importance for at least a preliminary investigation, and Dr. T. C. Merrill, Assistant Forest Pathologist, was detailed to make an examination of the cases reported from Hartford and vicinity. Inasmuch as his report was not conclusive, I, accompanied by Dr. Merrill, made a careful examination of the reported cases in Massachusetts and New Hampshire. It was found that the cases in western Massachusetts were reduced to two. A conference with the attending physician in these cases made it clear that in one instance the illness was not connected in any way with chestnuts, and, in the opinion of the physician, there was no evidence that the illness in the second case was caused by chestnuts, although the patient had been eating nuts which came from an area in which some of the trees were affected with blight.

The story that gray squirrels were dying from this cause was found to be based on the fact that a game-warden had found two dead squirrels which had apparently perished from disease, as there were no shot marks on them. The publicity which had been given to the subject had caused something of a local scare, and the schoolteachers had instructed the children to eat no chestnuts, the result being that no chestnuts were on the markets, and the dealers had been obliged to throw away their stock of nuts.

In eastern Massachusetts, an examination of the reported cases and conferences with physicians and health officers brought out the fact that there was not a single case of illness that could be attributed to the eating of chestnuts either from healthy or from blighted trees.

Only one case had been reported from New Hampshire, and this was found to be a case of severe illness following the ingestion of a considerable number of chestnuts, but the tree from which these nuts had been gathered appeared to be entirely healthy. A careful examination by Dr. Merrill brought out no evidence of the presence of blight. It is true, however, that the tree is located in a region in which the blight exists, and as it is sometimes difficult to detect the disease, it cannot be stated positively that the tree was entirely healthy. The attending physician very kindly gave a detailed account of the case, in which the symptoms had been decidedly puzzling, but he himself was not ready to diagnose the trouble as due to chestnut poisoning.

RESULTS OF FIELD EXAMINATION

Dr. Merrill,¹ as already reported in *THE JOURNAL*, tabulated the symptoms observed in the cases. A careful examination of the detailed report of these twenty-one cases, as tabulated by Dr. Merrill, shows that only one case could definitely be connected with the eating of chestnuts from a blighted tree. This was the fatal case, numbered 3 by Dr. Merrill, and in this case there was no clear evidence that the disease was caused by the chestnuts. In only one of the other cases, the New Hampshire case, numbered 21 in Dr. Merrill's table, was there a definite connection between the eating of chestnuts and the illness, and in this case the chestnuts were from an apparently healthy tree.

It is well known that raw chestnuts are not very digestible (Saiki,² Merrill,³ Jaffa⁴). It is also well known, at least in New England, that many persons have an idiosyncrasy which makes the eating of any considerable number of raw chestnuts harmful. It is well known that children, eating too many of these nuts, frequently are affected with sore mouths and with skin eruptions, and most of the described details of the symptoms of the cases investigated can be explained on the basis of an idiosyncrasy of this kind. This is so evident that it seems unnecessary to go into a detailed discussion of the symptoms in these cases.

The final result of the field examination, then, made it clear that there was no evidence whatever that nuts from trees affected with the chestnut-bark disease produce illness.

LABORATORY EXPERIMENTS

In order, however, to make this conclusion more certain, it was thought best to carry on some detailed experiments in the laboratory. Chestnuts were obtained from areas affected by the chestnut blight, and as many as possible were collected from the trees which were supposed to be associated with the cases of illness. The material collected was fed to white rats, rabbits and a monkey. A considerable quantity of the material collected from one of the trees which was supposed to be connected with one of the fatal cases in Connecticut was fed to the monkey, which ate it greedily.

All these feeding experiments were negative. Inasmuch as no results were obtained, it does not seem at all necessary to go into the details of the feeding experiments, which were carried on in the laboratory of the Office of Poisonous Plants by Mr. A. B. Clawson, physiologist. Mr. O. F. Black, chemical biologist, made some extracts of chestnuts collected from a Connecticut area infested with the chestnut blight, and these were administered to mice in the form of hypodermic injections, with no result. Mr. Black also made a chemical examination of the nuts with reference to the presence of any toxic principles and found none.

SUMMARY

1. An examination of the reported cases of poisoning from eating chestnuts collected from trees affected with the chestnut blight showed that there was no evidence that nuts from blighted trees contain any more deleterious properties than those from healthy trees, and the symptoms which had been supposed to be connected with blighted chestnuts could in almost all cases be explained as symptoms which would be produced by healthy chestnuts in some persons.

2. Laboratory experiments in feeding the whole fruit, in the use of extracts and in chemical examinations failed to show any toxic properties in the nuts.

3. While the results of the investigations were negative, it is believed that the study was sufficiently thorough and comprehensive to show that there is no ground whatever, either in the experience of the physicians or in the results of laboratory tests, to think that nuts from trees affected with the chestnut blight disease are any more injurious than those from healthy trees.

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Permeability of the Intestines in New-Born and Sick Infants

Lawatschek reports experiments (*Prager med. Wchnschr.*, 1914, xxxix, 185) at Prague on the absorbing power of the intestines in young infants. He found that albumin was absorbed through the gastro-intestinal tract so readily that it was speedily found in the urine in infants up to 10 days old and in infants with severe gastro-intestinal derangement at any age. The intestines normally seem to become less permeable with every day after birth, but the albuminuria—testifying to the abnormal absorbing power of the intestines—was manifest up to the tenth day of life, at which time the infants left the hospital. He examined thirty-eight new-born infants and forty-six sick infants, feeding them at one meal with half the beaten white of an egg, undiluted. The liquid part is readily taken but the infants do not swallow the froth, so that the amounts actually ingested are liable to be irregular. All the healthy new-born infants and also the older infants who were sick gave the positive reaction in the urine. The absorbing capacity seemed to parallel the severity of the gastro-intestinal derangement.

1. Merrill, T. C.: Is there a Toxemia Referable to the Eating of Chestnuts? *THE JOURNAL A. M. A.*, Jan. 24, 1914, p. 289.

2. Saiki, T.: The Digestibility and Utilization of Some Polysaccharide Carbohydrates Derived from Lichens and Marine Algae, *Jour. Biol. Chem.*, 1907, ii, 251.

3. Merrill, L. H.: Digestion Experiments with Chestnuts, *Bull. 131, Maine Agric. Exper. Station*, 1906, p. 146.

4. Jaffa, M. E.: Nuts and their Uses as Food, *Farmers' Bulletin 332, U. S. Dept. Agric.*, 1910.