Queries and Minor Notes

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HAZARDS OF EXPOSURE TO GLASS WOOL, GLASS FRIT OR FOAM GLASS

To the Editor:—Can you give me any information as to the hazards to the health of workers employed in the making of glass floss?

Jean Henderson, M.D., Stamford, Conn.

ANSWER.—The term "glass floss" is a nondescript one variously applied to "glass wool," to "foam glass" and to the "glass frit" as used in porcelain enamels. The manufacture of the last named entails the greater exposures, since common frits may contain lead, silica, fluorspar, cryolite, nitrates, antimony and the like. Further, colored frits may contain selenium, cadmium, chromates, uranium or manganese, depending on the color desired. Some of these enamel frits long have been regarded as a frequent source of lead poisoning. However, it seems more likely that this inquiry refers to "glass wool" or "fiber glass." The process of manufacture differs with the ultimate use contemplated, such as the manufacture of "glass silk" for garments, diving suits, coverings for machinery or, instead, glass pads for air conditioning, insulation, refrigeration or laboratory usage. All further comment is limited to the latter and coarser process. Glass to be reduced to the "wool" state is already made, although the composition may be dissimilar to ordinary glass. The starting point for "glass wool" is the remelting of this glass. Furnaces are so constructed that, when suitable temperatures are reached, the molten glass may be discharged through a sievelike structure. The strings of glass immediately are blown on with live steam or air under pressure. The result is a disintegration of the glass strings into minute fibers lying somewhat in parallel lines in the direction of the air blasts. Since the process starts with preformed glass, the usual exposures of glass manufacture may be eliminated. The remaining and specific exposures may be three in number and are (1) the usual ill effects of high temperatures, (2) mechanical injuries from spicules of glass or (3) carbon tetrachloride or ether vapors, which chemicals are sometimes used to remove a mineral oil lubricant, at times applied to the glass fibers to promote disentanglement. Any handling of fibrous glass may lead to the penetration of the skin by numerous minute glass particles. This may lead to isolated, slow healing minor furuncles or a more diffuse dermatitis. For the purpose of lubrication a light mineral oil may be applied to the mass of glass wool in connection with its "combing." Later this must be removed through the use of some oil solvent, of which carbon tetrachloride is but one example. Although Schulz (Gasmaske **11**:57, 1939) mentions an asbestosis-like condition of the lung of a man working with glass wool, it may be doubted that any specific pneumonoconiosis is likely to arise. A publication entitled "Safe Practice in the Manufacture and Usage of Fibre Glass," being Safe Practice Bulletin No. 58 of the Pennsylvania Department of Labor and Industry, February 1940, furnishes extensive information about the exposures incident to this industry.

VERTIGO IN PATIENTS WITH HYPERTENSION

To the Editor:—Is there any treatment that relieves vertigo in cases of hypertension, especially among the aged, when reduction in the blood pressure does not give relief from the vertigo?

M.D., Illinois.

ANSWER.—The cause or causes of vertigo in persons with hypertension is not accurately known. Persons with hypertension with or without cerebral arteriosclerosis may conceivably, by sudden motions of the head, alter the blood supply to, and thereby the hydrodynamics of, the endolymph system of the static labyrinth and so produce dizziness. Changes in the walls of the end arteries of the labyrinth may further lead to degenerative alterations in the neuroepithelium of the inner ear and so cause vertigo. Blood-vessel changes of this type may also be responsible for occasional and minute hemorrhages into the labyrinth, producing thereby abnormal sensations roughly classed as vertiginous.

It is clear that treatment must in large part be empiric and symptomatic. In general, therapy should be directed toward the treatment of the primary ailment and secondarily toward the vertigo. Such latter efforts tend to pattern themselves after the treatment in vogue for Ménières syndrome, although the causation of the latter and the history and findings are thought to be quite different from that seen in persons with hypertension.

The physician may try limitation of fluids for a while; this water may be restricted to about 1 pint a day. In this country, however, many favor instead a low sodium diet and the ingestion of ammonium chloride as recommended by Furstenberg. The latter is given in capsules, six 7½ grain (0.5 Gm.) capsules being taken three times daily with meals. This is kept up for three days and the drug is then omitted for two days and again resumed. It is best to give the drug in divided doses between mouthfuls of food to avoid gastric distress and vomiting. The treatment is carried on for about six weeks when the ammonium chloride is discontinued, but the salt poor diet is pursued further for another six weeks.

Constipation should be avoided. Excessive use of tobacco and abuse of tea and coffee should be forbidden. Small doses of phenobarbital as well as potassium bromide are occasionally found useful. The sodium salts of these should not be given. If the patient is an older person some thought should be given to the possibility of the presence and the correction of a vitamin lack. The patient should be cautioned about sudden changes in position of the head, as in suddenly arising from bed and in leaning forward to wash the face and tie the shoe laces. It is obvious that the treatment recommended is not based on an exact knowledge of the cause of the symptoms and is but a rationalization of the incomplete knowledge of the day.

References:

McNally, W. J., and Stuart, E. A.: Vertigo from the Standpoint of the Otolaryngologist, *Tr. Am. Acad. Ophth. & Otolaryng.* **46**:33 (Dec.) 1941.

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UNCOOPERATIVE PATIENTS WITH SYPHILIS

To the Editor:—In October 1939 a married couple came to me with syphilis in the initial stage. They were put on alternating neoarsphenamine 0.6 Gm. and intramuscular bismuth subsalicylate according to the Public Health Service schedule until March 23, 1940, receiving in this time eighteen doses of neoarsphenamine and four doses of bismuth each. In March 1940 I became ill but arranged for their treatment with a neighboring physician of their own choice. On returning to work in July 1940 I persuaded them with considerable trouble to resume treatment, which I completed in December 1941. They have in that time received thirty-four doses of neoarsphenamine and thirty-six doses of bismuth each. In the interval of four months during which I was ill they did not take any treatment as I had arranged for them. Except for those four months they were quite regular in coming in for their treatment. On Jan. 10, 1943 I took a Wassermann test, which was positive in the wife, as were also the Kline and Kahn reactions. I do not believe that these people will be willing to take extensive treatment again. They have a large family and I should like to give them such treatment as they are willing to take and such as will keep down the infection until the disease gets more advanced. These are the things that I wish to know: What would you suggest as the minimum method of keeping the disease under control? How long will it probably be until these cases can be depended on to be noninfectious without treatment?

M.D., Iowa.

ANSWER.—There is no minimum method of keeping syphilis under control. No guess can be expressed as to the length of time in which these patients will remain noninfectious without treatment. The only thing that can be said in this respect is that 85 per cent of infectious relapses occur within the first two years after the cessation of treatment.

The first correct procedure in the management of this situation at the moment is an immediate examination of the spinal fluid in both husband and wife. The enquirer gives no information as to the recent serologic status of the husband, although it is implied, since the wife is still seropositive, that the husband may be seronegative. If the husband shows no physical evidence of syphilis, if his blood test is negative now and if the spinal fluid is now normal, he does not require further treatment but should be followed with blood tests every two months for the next year, every six months thereafter for an indefinite period of time, and with annual physical examinations.

The wife certainly requires more treatment. The nature and kind of this cannot be outlined without knowledge as to the spinal fluid findings.

There is no royal road to the cure of syphilis, and if the patients refuse to take adequate treatment they should do so at their own risk after the possible consequences have been fully explained. To give an occasional treatment "such as they are willing to take and such as will keep down the infection until the disease gets more advanced" is medically indefensible.