TREATMENT OF TRICHOMONAS VAGINITIS BY SILVER PICRATE

BY

W. NEVILLE MASCALL, M.A.Cantab., M.R.C.S.
L.R.C.P.

Chief Assistant Medical Officer, Whitechapel Clinic,
Turner Street, L.C.C.

It is evident that very little is known about the organism *Trichomonas vaginalis* beyond the fact that it occurs in the secretions of many cases of severe and recurrent vaginitis, and that the condition definitely improves when the parasite is eradicated from the vaginal secretion.

The notorious feature about the infestation is the frequency with which the organisms reappear in the vaginal secretion either after the occurrence of the menstrual period or after the suspension of treatment. In the present state of our knowledge it is impossible to say whether this reappearance is due to a reinfection or to a relapse of the primary condition, as the source of the parasite and the mode of the infection are unknown.

Diagnosis

The method of demonstrating the *Trichomonas vaginalis* in the vaginal secretion is as follows:

A bead of pus is removed from the posterior fornix by means of a sterile platinum loop and is suspended in normal saline on a microscopical slide. This suspension is covered by a cover-slip and immediately examined by the dark-ground illumination method, and the characteristic movements of the actively motile organism observed.

Many lines of attack have been devised for the treatment of vaginitis due to the trichomonas, and the object of this paper is to bring forward a new therapeutic agent which, although used extensively in the United States of America, is comparatively unknown in this country. This agent is known as silver picrate, and is put up in two forms, both of which are employed in the treatment of the condition: (a) a greenish-yellow powder in phials each containing 5 grains; (b) suppositories each containing 2 grains. Shelanski (1936), during his laboratory investigations of the toxicity of silver picrate on the *Trichomonas vaginalis*, found that if this compound contained 30 per cent. of silver it was superior to silver nitrate, picric acid, and various other combinations of silver and picric acid.

Line of Treatment

If a positive was recorded the patient was insufflated by means of a Shelanski insufflator (see figure) in the following manner:

The patient is placed on a table in the lithotomy position. A speculum is inserted and the vagina swabbed out with a cotton-wool swab. The cervix is closely inspected and any mucus if present in the cervical canal is removed by means of a Playfair probe soaked in saturated sodium bicarbonate.

After removal of the label from the phial it is attached to the insufflator. Each phial contains the correct amount of powder for one treatment, and the screw thread on the phials is so made that each one fits that on the insufflator. The nozzle of the instrument is then gently inserted into the vagina until the rubber shield fills the vaginal introitus. By pumping the rubber bulb the powder is forced out into the vagina until the entire contents of the phial are exhausted.

The instrument may have to be slightly withdrawn at intervals to allow the pressure in the vagina to be eased. By this method the vagina is ballooned, so allowing the powder to penetrate into all the creases and folds. The

patient is then advised to attend daily, when the vagina is again swabbed out and a silver picrate pessary inserted.

The following points should be observed:

1. No pain should be caused during the insufflation.
2. The pessary treatment is repeated daily for six days and it is then followed by another insufflation.
3. After the pessary has been inserted a dry gauze plug thirty-six inches in length may be lightly packed into the vagina to avoid any leakage.
4. If the patient is unable to attend daily she is directed and instructed to insert the pessary herself each night on retiring.
5. No douching should be allowed during the course of treatment.
6. No treatment is given during the menstrual period.
7. In pregnant cases it is perhaps best to rely on the pessaries alone, but insufflation is not definitely contra-indicated.
8. The duration of the treatment depends on the disappearance of the organism and the signs and symptoms.

Clinical Trial

Patients suffering from vaginal infestation with the *Trichomonas vaginalis* attended daily, and before the treatment was given a suspension was examined and the presence or absence of the parasite was noted. Examinations were also made after the menstrual period as it is at this time that recurrence of the infestation is most likely to happen.

The full treatment consisted of insufflation followed by daily dry swabbing and insertion of a pessary. In the series of twenty-eight cases receiving the full treatment the following results were obtained.

Upon insufflation the *Trichomonas vaginalis* disappeared on the next day from the secretion in twenty-six cases (92.8 per cent.).

In the two cases in which the trichomonas was present on the second examination it was observed that the numbers had decreased and that the organisms were sluggish in movement. The parasites were absent on the third examination.

Of the twenty-eight cases fifteen (53.5 per cent.) remained persistently negative, but in thirteen (46.4 per cent.) a relapse or reinfection occurred.

Of the relapses or reinfections five (38.4 per cent.) occurred following a menstrual period, and eight (61.5 per cent.) occurred at times other than after the menstrual period.

Total cases	28
Cases negative following insufflation ..	26 (92.8%)
No relapses	15 (53.5%)
Total relapses	13 (46.4%)

Of the relapses:

(a) Occurring after the menstrual period..	5 (38.4%)
(b) Occurring at other times	8 (61.5%)

One pregnant case not in the above series was treated by pessaries only, and the trichomonas disappeared after the first treatment: it recurred, however, on the next day, but afterwards the case remained persistently negative. In all cases the local condition showed marked clinical improvement, the discharge becoming markedly less in amount, local inflammatory signs settling down, and such symptoms as irritation and soreness abating, in spite of the fact that in eleven of the cases there was coexisting gonococcal infection.

My thanks are due to Colonel Burke for permitting me to publish these observations.

REFERENCE

Shelanski, H. A. (1936). *J. Lab. clin. Med.*, 21, 790.

Clinical Memoranda

The Emotional Factor in the Causation of Squint

In a recent article on the care of children's eyes, in a popular journal devoted to the service of childhood and youth, an ophthalmic surgeon wrote: "Several observers have lately remarked on the frequent association of squint with a nervous disposition. There are authentic instances of a squint having dated from some fright, or from some occasion for jealousy such as the birth of a baby sister or brother. Anxiety can be a factor in its development." I wrote about these matters many years ago ("An Inquiry into the Origin of Squint, Left-handedness, and Stammer," *Lancet*, August 2, 1924), and now once more suggest that an emotional cause of squint is far commoner than is suspected. Unfortunately the connexion is not recognized, because surgeons and parents have still to learn the lesson psychologists have been teaching for decades—that what a very young child sees and hears may sometimes induce not only emotional distress but even actual illness. The subtlety of the circumstances may be gauged from the following case.

A CASE IN POINT

A boy aged 2 years and 4 months began to squint in November, 1936, six weeks before he was brought to me. The deformity was not constant; in contrast to nearly every squint that I have seen it was present not when the child was excited—the eyes were then usually straight—but when he became dreamy. A logical approach to the problem, surely, would be to find out what he was dreaming about, for none of the usual explanations of convergent squint is adequate to account for convergent activity during apparent dreamy relaxation. As everyone knows, the eyes become straight and have a far-away look during a "brown study."

Unfortunately it is not possible to get evidence by questioning so young a child, and support for surmise must be sought indirectly. There is no more helpful beginning to an investigation of a child's troubles than to know how the mother was faring at the time the troubles developed.

To the question "What was wrong with you six weeks ago?" the mother, Mrs. X., replied, "I had influenza; the squint developed when I began to take the child out again."

"Has he had any other symptoms since the squint began?"

"No, but he has been cutting his last two teeth during that time."

"No bed-wetting?"

"Well, he has always wetted his bed with the cutting of every tooth, and it has been especially troublesome in the last six weeks."

Truly a strange association of functions! How far it was dependent upon oral stresses at a still earlier phase is worthy of more detailed inquiry, since it is astonishing how often mothers comment upon the greater frequency of squint—another neurosis—during meal-times. At this point I merely used it for a guess that the child had taken weaning unusually hardly. The mother agreed: there had been much difficulty when it took place at the end of ten months.

Incidentally it is scarcely necessary to ask if the child sleeps in the parents' room; such a child as is before me *always* seems to do so! I then tell the mother that experience leads me to suspect that six weeks ago she was exceptionally interested in the birth of a baby, not necessarily her own; perhaps the interest was in childbirth generally rather than in an actual confinement. This she denies, and I seem to have drawn a blank. But I still feel that the parent-child relationship may be responsible for the breakdown of binocular vision, and ask, "Hav'n't you a bad monthly period six weeks ago?" I have found that even little children have an uncanny awareness of that function. The mother, after some hesitation, admits the truth. "Yes; as a matter of fact I had a miscarriage two months ago, and the bleeding continued for three weeks."

Thus the squint must have begun at a time when the child was seeing and hearing matters that four or five years later he would be carefully protected from seeing and hearing; imagination can now be invoked to visualize the situation in the bedroom shared by the child. Let it be remembered that the squint was not an instant and permanent reaction; it was delayed and inconstant. Indeed, at first it showed only when the child was *dreamy*. Have we here some indication of what he might be dreaming about? If we may take the daydreams of adults for comparison, it seems probable that the child's thoughts had no conscious definite shape, but that they were connected with a threat to the security of the love relationship with the mother seems likely. The sight of blood to a child—and the mother could not deny that her little boy had had many opportunities of seeing blood at that time—is full of significance of danger even at the age of 2. It is true that this view is only a surmise; even the mother could not divine what was in the mind of her little boy. But in spite of her early resistance to my suggestions she readily accepted them later when the situation was reconstructed for her—a sensitive observant child sleeping in the parents' room with the beloved mother ill and depressed, suffering from some mysterious ailment associated with bleeding, from which she was making a slow recovery. She was further impressed when I asked for the history of left-handedness and stammering in the family. She declared herself to be wholly right-handed, though she had a left-handed brother, but she had stammered at the age of 3 "when a baby brother was born." I have found that adults with such a history usually retain some significant if apparently trivial left-handed sign of former contrariness, and after further thought she called to mind that she always mounted a bicycle from the "wrong" side.

But let us apply the same formula of mother-child relationship to Mrs. X. herself. In the eventful November her own father and mother had been discussing separation, to Mrs. X.'s great distress, for the father had threatened to commit suicide if his wife left him. May we not assume that these tragic circumstances helped towards her miscarriage, and the squint in the frightened baby observer?

W. S. INMAN, M.B.Lond.,
Senior Ophthalmic Surgeon, Portsmouth
and Southern Counties Eye and
Ear Hospital.