In view of the frequency with which rheumatism occurs in children of the hospital class, and the number of times one is confronted with a child suffering from abdominal pain without other signs or symptoms, it is worth while considering how often children with these abdominal symptoms may be actually suffering from rheumatism, of which this pain is at the time the only manifestation. In this connexion the "digestive group" of rheumatic patients discussed by Giraldi¹ is significant. Another point of interest is the relationship which exists in childhood between sore throat, appendicitis, and abdominal pain, the first of which often appears to precede either of the others; this has been fully discussed by Brennemann,^{2,3} and seems to be of importance here because of the known association of tonsillitis with rheumatism. Obviously the possibility of a case that presents the features of true appendicitis proving to be rheumatic in nature must not be held to contraindicate operation, since, if the case should actually be one of rheumatism, no great harm should result, whereas a tragedy is likely to occur if acute appendicitis is left without surgical intervention.

Cases such as the above probably occur more frequently than is generally realized, and on this account it seems advisable that attention should be directed to them.

I should like to thank Dr. Bratton for the pathological reports, and those members of the staff who had care of the patients, for permission to report these cases.

REFERENCES

- ¹ Giraldi, J.: *Arch. Dis. Child.*, 1930, v, 379.
² Brennemann, J.: *Journ. Amer. Med. Assoc.*, 1927, lxxxix, 2183.
³ Idem: *Amer. Journ. Dis. Child.*, 1921, xxii, 493.

ONYCHIA AS AN OCCUPATIONAL DISEASE *

BY

H. HALDIN-DAVIS, M.D., F.R.C.P.

DERMATOLOGIST TO THE ROYAL FREE HOSPITAL

Considering how much the nails are exposed to inflammation and injury in innumerable industrial processes, it is remarkable how little has been written about them in the vast literature that has grown up in the last twenty years dealing with occupational diseases of the skin and its appendages. In the latest edition of Prosser White's book on occupational diseases of the skin there is scarcely any mention of the nails. In the exhaustive treatise on the same subject emanating from the Viennese school, collected by Oppenheim, Rille, and Ullmann, there is a short chapter on the subject contributed by Heller of Berlin, who for the last thirty years has been studying diseases of the nails, and is undoubtedly the greatest authority on them at the present time. Heller's chapter is illustrated by many excellent photographs, and shows many instances of deformity and atrophy of the nail brought about by various industrial occupations. Very remarkable are the erosions of the nails which occur among those who work in calcium chloride. Apparently, small collections of this substance are caught under the free margin of the nail and act almost like cauterizing agents on the tissues in the vicinity. Alterations in the nails owing to concomitant eczema are also well known, and occur in many departments of chemical industries. Another interesting industrial disease of the nail is that which affects certain workers in breweries. Those workmen whose duty it is to clean out the casks in which fermentation takes place often remove adherent masses of yeast with their finger-nails, and this causes the nails to be riddled with lacunae, while crusted excrescences grow beneath and cause the destruction of the nail. Most, however, of the lesions here described deal with

alterations of the terminal portion of the nail, which frequently in many industrial occupations becomes rubbed down by friction or softened by the macerating action of various fluids. It is well known, for example, that washerwomen never have to cut their nails, which are always soft and occasionally become loosened.

The type of lesion to which I wish particularly to direct attention does not, however, figure at all conspicuously among the recorded injuries inflicted on the nails by industrial conditions. I refer to chronic onychia. In the exhaustive treatise of Oppenheim, Rille, and Ullmann the word does not appear in the index. I have also searched the literature for some reference to onychia as an industrial disease, but can find no paper bearing on this aspect of the complaint. The only variety of onychia which has stirred clinicians to publication appears to be syphilitic onychia, which is the subject of several papers, and I now learn from Dr. Rolleston that diphtheritic onychia has been described.

The clinical characteristics of chronic onychia hardly require recapitulation. The skin at the base of the nail is thickened into a dull red sausage-shaped roll, encircling the nail and gradually tapering off as it approaches the distal end. There is no great quantity of pus produced, but an occasional bead of moisture may be expressed. In cases which have continued for some months, the nail-plate itself gradually loses its smooth and polished surface, becomes wrinkled, and may be actually deformed. I have seen a case in which the formation of the nail-plate was so seriously interfered with that only heaped-up friable material was formed, which really hardly bore the slightest resemblance to normal nail substance. There is a certain amount of tenderness at the inflamed bases of the affected nails, but otherwise the symptoms are not severe.

In my opinion, most cases of chronic onychia are caused by occupations which necessitate frequent immersion of the fingers in water, and the incidence of the complaint is probably encouraged when soda is used freely. Such occupations are beer-bottling, office-cleaning, and that occupation which, notwithstanding the social stigma supposed to be attached to it, is still the most widely followed in the world—namely, domestic service. The influence of continual moisture was well exemplified in the case of one young patient, a girl, employed in beer-bottling. She used to grasp the neck of the bottles with the left hand, and the beer continually overflowed on to her fingers; she contracted onychia on that hand only, while the fingers of the right hand, which were only seldom wetted, escaped. Another patient was a lady who, during the war, volunteered to do the washing for several of her soldier relations returning on leave. She contracted chronic onychia, which took several years to clear up. I think that it is commoner in women who only become exposed to this danger comparatively late in life than in those who are brought up to what may be described as the "rough work" of domestic service. Moreover, in many cases the hardened charwoman regards a slight amount of onychia as normal or "all in the day's work." I think that if one takes the trouble to examine the fingers of many of these ladies one will often find a slight degree of thickening of the skin round the base of the nail, even although they make no complaint about it. Another cause of onychia occasionally seen, but which is hardly describable as an occupational disease, is manicuring. There are some women who contract the condition from using the orange stick with excessive vigour. It may be of medico-legal importance to bear this possibility in mind. Circumstances may easily arise in which the occupation of the patient may be blamed for that which is really the result of a pardonable vanity, and the tendency of legislation is continually putting additional

* Paper read in the Section of Dermatology at the Annual Meeting of the British Medical Association, Eastbourne, 1931.

temptations in the way of patients to ascribe all their misfortunes to their employments.

One reason, perhaps, why onychia has not drawn much attention as an occupational disease may be that many of the cases occur in patients whose hands are already affected by severe industrial dermatitis, and in whom it is largely secondary to that dermatitis. Here I am especially concerned with onychia occurring independently, and I think that if looked for it will be found to be of more importance industrially than has hitherto been supposed.

A NEW METHOD FOR THE INJECTION OF LIPIODOL

BY

ERNEST FLETCHER, M.A., M.B.CAMB.,
M.R.C.P.LOND.

ASSISTANT PHYSICIAN, QUEEN MARY'S HOSPITAL, STRATFORD;
PHYSICIAN, ST. MARYLEBONE DISPENSARY; REGISTRAR
ROYAL CHEST HOSPITAL

The intra-bronchial injection of an iodized oil, opaque to the x rays, for the diagnosis of certain conditions of the lungs and bronchial tubes has been practised for some time. This method of investigation has advantages peculiar to itself, and there is no other method which gives the same information. It is therefore important that the method of injection should be rapid, painless, and efficient. The condition under treatment may require repeated injections of the oil, and the objections of patients to these repeated injections by the methods at present in use has made it apparent that some easier and more rapid technique should be evolved.

There are two possible methods of injection: the intra-laryngeal (usually called the oral route), and injection through the crico-thyroid membrane direct into the larynx.

The great disadvantage of the oral route is that it is not applicable to children. The condition which most commonly requires lipiodol injection, a pneumonitis involving the larger bronchi, occurs frequently in children, so that in any attempt to evolve a technique of injection which can be universally applicable only the alternative method can be considered.

A general anaesthetic has previously been necessary for the treatment of children, and this has been a serious disadvantage. If a little anaesthetic only is given the children cough as they come round, and are apt to cough up the oil and swallow it. With deep anaesthesia, apart from the risks which attend the abolition of the cough reflex, the x -ray picture has to be taken with the patient lying down, and so fails to show fluid levels, which are an important diagnostic help.

An attempt has here been made to simplify the technique of injection through the crico-thyroid membrane and to dispense with the necessity of a general anaesthetic for child cases. The illustration is of a special syringe devised for this purpose.

DESCRIPTION OF APPARATUS

This is a 20 c.cm. syringe with a barrel greater in diameter and thus shorter in length than the one generally in use. The usual thumb-piece has been replaced by a lever. The piston is attached to the working arm of this lever by a rod, and into the other arm is screwed the barrel of the syringe. The rod is attached to the piston by a universal joint. A spring is inserted between the two arms of the lever to keep them constantly apart and to bring the piston up the barrel. To the end of the barrel is attached a bayonet joint. A filling tube is provided. A special trocar-pointed needle with lateral

holes fits the syringe. On this needle a shoulder may be placed, if desired, to prevent it penetrating the larynx beyond a certain point.

TECHNIQUE OF INJECTION

The injection may be made through the crico-thyroid membrane or between two of the upper rings of the trachea. Some time before the injection the skin over the selected site is swabbed with spirit and painted with 1 per cent. picric acid, and this area protected with sterile cotton-wool held in place by a bandage. Before proceeding with the injection the patient should be instructed to bring up as much sputum as possible. At the time of injection the dressing is removed, the patient lies down and, using a syringe fitted with a very fine hypodermic needle, the skin is anaesthetized with $1/2$ c.cm. of 2 per cent. novocain and adrenaline. It is good practice to form a bleb to mark the position of the crico-thyroid membrane. The filling tube is fitted to the special syringe and the lever is compressed until the piston reaches the end of the barrel. The tube is then placed in a bottle of warmed oil and the pressure gradually released. As the spring separates the arms of the lever, the piston moves and the oil flows into the barrel.

The piston is so arranged that it goes past the 20 c.cm. mark; the barrel therefore contains 20 c.cm. of oil and 3 to 5 c.cm. of air. The filling tube is removed and the needle attached. The syringe is then inverted and the air expelled. The piston is kept steady at this point by means of a check-piece. The filling of the syringe and fitting of the needle takes about thirty seconds.

With adults it is now usual to inject about 5 minims of 10 per cent. cocaine hydrochloride into the larynx from an ordinary 1 c.cm. syringe, but with children I generally omit this in order to make the operation more rapid.

The needle of the special syringe is now gently pushed through the crico-thyroid membrane until it is felt to enter the larynx, and the patient is sat

up. The lever is held firmly and the check-piece released with the first finger of the right hand. Tension on the lever is now gradually released. If the end of the needle is in the larynx bubbles of air will enter the syringe. When this occurs proceed with the injection. At any stage of the injection the position of the end of the needle can be verified by gently releasing the lever. At the end of the injection the lever is released, any oil in the needle being pulled back into the barrel. The needle is then withdrawn, the neck gently rubbed, and the puncture sealed.

The x -ray picture is taken in the upright position.

There are no after-effects to these injections and no complications have occurred.

In practice this method will be found considerably quicker and far more comfortable for the patient than those previously in use. It is not usually necessary to admit patients into hospital; provided the condition for which the investigation is made permits, the patient may be allowed to go after the investigation has been completed.

A syringe of this type, with the various modifications as they have been introduced, has been in use for nine months and has given satisfaction. It is made by Messrs. Allen and Hanburys.

Special syringe, showing filling tube (above), and needle with shoulder fitted.