the practitioner who usually attended her; he was unable to detect any abnormal physical signs—the liver was not enlarged, the gall bladder could not be felt, there was no evidence of gall stones. He had had the patient under treatment on and off for years for “indigestion and chronic constipation.” So far as he knew, she had never been jaundiced.

On November 4th, 1908, Mrs. W.'s blood gave a positive reaction in thirty minutes. The same evening she was given, in accordance with Professor Delépine's method, a dose of sulphate of soda, and next morning specimens of her faeces and urine were obtained. Both contained typhoid bacilli. A month later (December 3rd) further specimens were obtained without the administration of a cathartic; on this occasion the bacilli were found by Professor Delépine in the faeces only; the urine was sterile. Attempts to obtain further specimens of blood from Mrs. W. were unsuccessful.

It seems highly probable that the influenza and pneumonia of 1893 was in reality enteric fever. It is remarkable that she is not known to have infected any one prior to 1898, particularly so as she was engaged in general housework, including the preparation of food, etc., for her lodgers. Certainly her attacks of abdominal pain, etc., do not seem to have troubled her prior to the middle of 1898.

She cannot, when her serum gave a positive reaction in November, 1908, have been infected by J. H. W., the last case to occur in her house, as not only did her excretions contain typhoid bacilli at that time, but they were present in her faeces on December 3rd, six weeks after J. H. W. had been removed to hospital.

The negative reaction obtained in November, 1907, is not of great importance, for, as Doerr¹ showed in 1905, the persistence of typhoid bacilli in the bile is unable to preserve the agglutinating properties of the blood.

It has been pointed out also by German observers that this not infrequently occurs. Forster and Kayser² suggest that the attacks of abdominal pain, vomiting, etc., which occur from time to time are due to local inflammatory changes in the gall bladder set up by the contained bacilli, and that with each attack more agglutinating substances develop in the blood stream. Widal's reaction, then, would probably be obtained with a specimen of blood taken soon after one of the periodic attacks of abdominal pain, etc., but with the lapse of time, and without the assistance of another attack, the serum would lose its agglutinating properties. Mrs. W. has had “stomach attacks” at intervals of a “few days” for upwards of ten years.

None of the patients returned to lodge again at Mrs. W.'s after recovery; there is no question, therefore, of any one of them being responsible for any subsequent case.

It is interesting to find that the last 6 of the 7 cases had been living at the house of Mrs. W. for four, three, two, three, three-quarters, and one and a half months respectively before they became infected. No record of the length of time that Case 1 had been here prior to infection was made. This calls to mind Kayser's famous case of the Strassburg baker.³

There appears to be some element of periodicity in the cases infected; this has been previously noticed by Davies and Walker Hall.⁴

For permission to publish this case I am indebted to Dr. Niven.

REFERENCES.

- ¹ Doerr, *Centralbl. f. Bakt.*, 1905, v. 39. ² Forster and Kayser, *Münch. med. Woch.*, 1905, No. 31. ³ Kayser, *Arb. it. aus dem Kais. Gesund.*, 1906, B. 24. ⁴ Davies and Walker Hall, *BRITISH MEDICAL JOURNAL*, October 17th, 1908.

THE E.M.I. (oeuvre d'Enseignement Médical Complémentaire), which is under the patronage of the French Government, has this year chosen Belgium and Holland as the scenes of its tour of medical study. The tour will last from August 1st to the 20th. The party will start from Lille, returning by way of Luxemburg and Alsace, and separating at Vittel. It will visit Ostend, Middelkerke, Blankenberg, Bruges, Ghent, Brussels, Louvain, Antwerp, Rotterdam, The Hague, Leyden, Amsterdam, the Isle of Marken, Utrecht, Liège, Spa, Bourgoimont, Luxemburg, Strassburg, Munster, Schlucht, and Gerardmer. The association issues a journal entitled *L'Enseignement Médico-Mutuel International* (published at 12, rue François-Millet, Paris XVIème) in which detailed information is given.

SYPHILITIC LEUCODERMA IN A MALE.

BY

STAFF SURGEON KENNETH H. JONES, M.B.,
ROYAL NAVY.

THE following case is of interest, both because it occurred in a male—an event of considerable rarity—and because of the large area affected.

W. R., aged 21, a newly entered stoker recruit, was on April 20th, 1909, picked out of about 200 men and boys, all stripped to the waist, and awaiting their examination by a medical officer as to personal cleanliness. He stated that previously to enlistment he was employed as a fireman at works in the North of England. He admitted having contracted syphilis about three years before, and the scar of the chancre was very obvious on the glans penis, near the meatus. According to his own account, he had suffered very little from secondary symptoms, and had had no regular or continuous treatment with mercury. With this exception he had always enjoyed very good health.

He was of blonde Saxon type, with very fair hair and blue eyes, well nourished and muscular. The whole of the trunk, both anteriorly and posteriorly, to about the level of the umbilicus, as well as the upper extremities as far down as the insertions of the deltoid muscles, was affected. The skin was to some extent pigmented, and in certain regions very dark indeed; whilst over the whole there appeared whitish rounded or oval mottlings or dapplings, most obvious where the surrounding cuticle was most deeply coloured. The pigmentation was most marked in the region over the outer two-thirds of the clavicles, and more so immediately above than just below them; in the middle line, over the inner thirds of these bones and over the upper edge of the sternum, it faded very markedly. The skin over the outer two-thirds of the clavicles, and for about 1 to 1½ in. above, was a deep brown, like that of a lightly-coloured Indian; that of the rest of the neck was normal. After these areas, the darkest parts were those over the top of the shoulders and over the deltoid muscles, pigmentation being very marked as far down as the insertions of the latter. The very dark coloration did not continue round the back of the neck in the form of a collar. In all the above areas the dapping was exceedingly obvious, the whitish patches being well defined and their edges sharply cut. Over the rest of the trunk, ventrally and dorsally, the condition was well marked but the pigmentation was less, the colour being of a light yellowish-brown; the dappings in consequence were less obvious, and showed less tendency to be sharply circumscribed. About the level of the umbilicus was a well-marked impression from the wearing of a tight belt, and below this the peculiar skin coloration was absent. The pale areas or dappings varied from ½ to ¾ in. in diameter, and tended to become smaller as well as less well defined on the chest, sides, back, and abdomen than in the clavicular regions and over the deltoids.

After an interval of six months, when an opportunity again occurred of making observations, the condition was, on the whole, slightly less evident than before, but was still most marked just over the clavicles and deltoid muscles; the whitish dappings showed a tendency to be less circumscribed, and the pigmented areas to decrease, both in extent and depth of coloration. The dappings showed a tendency to run into one another, especially on the abdomen. In the region of the nipples and over the scapulae all pigmentation had disappeared, together with the characteristic whitish areas (dappings). The mark of the belt had gone, but no pigmentation occurred below its former situation. Posteriorly on the left side the condition was most evident along the inner margin of the scapula and below it, whilst beyond the mid-axillary line, passing forward, pigmentation seemed to have cleared towards the middle line of the body. On the right side the condition was not so marked along the inner border of the scapula, but about as well marked below it as on the left; in the mid and anterior axillary lines, and towards the middle line of the body, however, it was well in evidence.

It is interesting that in so marked a case the sides of the neck, usually the parts affected, should escape altogether. It has been observed that syphilitic pigmentation usually, as in this case, clears away very slowly.

In fair Europeans, of the same type as the patient, exposure to the sun in some parts of the world, and especially accidental exposure of a portion of the skin usually protected, may produce a pigmentation as definite and as deep in colour as the syphilitic described above. Such pigmentation is frequently, but not always, preceded by an inflammatory erythema; it is very permanent, like the syphilitic, and may take eighteen months to two years to disappear, although there be no subsequent exposure to the sun.

Again, it is remarkable to what an extent scars and the cuticle round them tend to become pigmented in some moderately dark-skinned races, as, for instance, the Chinese; and also how very permanent is such pathological coloration, whether on an exposed or unexposed part of the body. Obviously, then, permanency is not peculiar to syphilitic pigmentation.

The whitish dapplings have been thought to represent degeneration following a roseolar syphilide, but in this case the man denied ever having had a secondary eruption of any kind.

The term "dappling" is taken from an excellent paper on this subject by Sir Jonathan Hutchinson in the *BRITISH MEDICAL JOURNAL* of January 9th, 1909, and describes the condition most admirably.

THE RELATION OF THE PAROVARIIUM TO CYST FORMATION.

BY PERCIVAL P. COLE, M.B., CH.B., F.R.C.S.ENG.,
DEMONSTRATOR OF ANATOMY, BIRMINGHAM UNIVERSITY.

THE parovarium—the rudimentary structure representing the Wolffian system in the female—presents itself as a series of vertical tubules, which below disappear into the ovarian tissue, but above join a horizontal tubule, which courses parallel to, but below the Fallopian tube. At its distal extremity this horizontal tube may have two or three slightly dilated terminations known as Kobelt's tubes, whilst towards the uterus it fades away, and can no longer be traced in the broad ligament. The outermost vertical tubule is in some cases so closely related to the fimbria ovarica that the two appear to fuse.

A striking fact with regard to the parovarium is that the degree of its development varies with the age of the subject, without direct relation to the increase in size of the broad ligament. Thus, in the fetus the parovarium can with difficulty be distinguished by the naked eye. At the age of 12, although the uterus and broad ligament and all the sexual apparatus have considerably increased, the parovarium is still a structure which might easily escape notice. It is most marked from the age of 20 onwards, and the most evident examples are found in women from 40 to 53.

In this connexion it is interesting to observe the clinical fact that cysts, originating in the parovarium, practically never occur before the age of 16. A section through a Kobelt's tube which occurred as a small pedunculated cyst shows that the wall contains a definite amount of muscular tissue, which cannot, however, be differentiated into layers. The lining cells are definitely columnar, an observation which is at variance with Doran's¹ statement, that every cyst connected with the outer portion of the horizontal part of the parovarium is lined with endothelium, and not with ciliated or columnar epithelial cells found in the vertical tubes.

A similar pedunculated appendage sometimes seen in the same neighbourhood is solid and not cystic. In the midst of the fibro-cellular tissue, of which the little body mostly consists, are small spaces lined by regular low columnar epithelium. These spaces are undoubtedly portions of Wolffian

tubules which have escaped obliteration. Surrounding these spaces a zone of muscle—differentiated by Van Gieson's stain—may occasionally be seen. The drawing (Fig. 1) shows two cell-lined spaces, and illustrates clearly the type of epithelium.

A comparison of the two bodies above described is interesting as showing in the one cystic dilatation, and in the other obliteration in progress but not complete, each isolated cell group being itself a potential cyst.

The probable course of events in the life-history of the parovarium is indicated in Fig. 1. Obliteration is probably never complete; the tubes are, to a very large extent, converted into solid cords, but here and there retain a lumen surrounded by characteristic cells.

This hypothesis has been verified by sections of isolated tubules cut transversely and longitudinally. The photomicrograph (Fig. 2) shows the appearance of a transverse section of a single isolated tubule; no trace of lumen is present. It has become a solid cord of fibrous tissue, in which are vessels. It is obvious that such a structure may easily be overlooked, even when careful search is made.

The photomicrograph (Fig. 3) is of a longitudinal section made through a single tubule, which presented a slight enlargement at one point. The section has exposed an irregularly shaped cavity in the wall of which some muscle can be distinguished.

The lining epithelium has become detached, but the lumen is filled with debris and cells. These cells, under a high power, resolve themselves for the most part into groups of well-preserved short columnar epithelium, the appearance of which is shown in Fig. 4. There can be no doubt that this cavity has been formed as a slight cystic dilatation in the course of a Wolffian tubule.

In these two sections (Figs. 2 and 3), taken from a woman aged 53, are seen the two stages of complete and partial obliteration. In this way it becomes possible to distinguish the potential factors concerned in the formation of cysts from the parovarium.

But opinions vary as to the frequency with which broad ligament cysts owe their origin to the parovarium. Formerly all cysts in this ligament were regarded as originating therefrom, whereas at least one observer holds that their source is Müllerian in a large proportion of cases. Meyer,² discussing these cysts, quotes Kossman³ as upholding the theory of their origin from accessory Fallopian tubes. Meyer disagrees with him for two reasons: First, because of the frequency with which small appendages are found, compared with the relative rarity of accessory tubes; and, secondly, because these appendages frequently occur in that part of the meso-salpinx in which the portion of the parovarium adjacent to the fimbriated extremity of the tube is wide and thick, and where, in his experience, the parovarium sometimes ends in small cystic dilatations, most frequently observed,

Fig. 1.—Drawing to show partial obliteration of Wolffian tubules accompanied by small cystic dilatations.

Fig. 2.—Photomicrograph showing transverse section of single isolated tubule, the lumen of which has been completely obliterated.