

begins well behind the head of the metatarsal bone on the dorsum of the foot between the affected toe and the second toe, and extends directly through to the plantar aspect between the toes. It should be made by dissection hugging the head of the 1st metatarsal and not by transfixion. The external lateral ligament of the joint is freely divided, and the great toe forcibly dislocated inward and reversed so that the articular surfaces of the metatarsal and 1st phalanx present. As much as may be necessary of these bones is now removed, the metatarsal being made convex and the phalanx concave. A fibrous fatty flap is then dissected up, beginning at the web between the toes and having its base at the point of section of the metatarsal bone. This flap is turned outward over the sawn metatarsal and fixed by a few catgut stitches. This flap is preferred to the bursal flap used in the Mayo operation, because the bursa is often in an unhealthy inflamed condition. The extensor tendon of the great toe is then cut and allowed to retract. If it is left it merely tends to reproduce the deformity, and in people who wear boots and shoes its loss is not felt. The toe is now straightened into position and the joint capsule loosely stitched. Drainage is provided by a few strands of gut and the wound otherwise closed. Singly claims for the operation that the incision is placed where it cannot be objectionable; that it affords much better exposure of the diseased ends of the bones than other methods, permitting accurate shaping of the new articular surfaces; that opening of the joint on the outer side with division of the shortened external lateral ligament is an important help in preventing recurrence; and that ankylosis is prevented and a new joint formed by the interposition of a fatty fibrous flap.

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DISEASES OF CHILDREN.

UNDER THE CHARGE OF

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VULVO-VAGINITIS IN YOUNG CHILDREN.

CASES of vaginal discharge in young children are by no means rare, and are usually due to infection by the gonococcus. Such cases of vulvo-vaginitis are looked upon with misgiving by those connected with hospitals for children or for babies. Many are the reports of the infection spreading widely through an institution, but in this country there is little experience of such widespread infection. In America it has been far otherwise, and there has recently been instituted a special clinic for the treatment of this disease in connection with Mount Sinai Hospital in New York (*Barnet, Arch. Pediat.*, September

1913). Of 50 cases in this clinic the etiology was found to be as follows:—(1) Discharged from hospitals and other institutions, 18 cases. (2) Sleeping with mother who had a vaginal discharge, 9 cases. (3) Sleeping with sisters who had a vaginal discharge, 5 cases. (4) Cases of unknown origin, 18 cases.

Duration.—The average duration of the condition before coming under observation at the clinic was $8\frac{1}{2}$ months. In one case the disease had lasted fully six years, with a positive gonococcus finding in the secretions of the vagina.

Seat of the Disease.—The vagina is dull pink, with pus usually present in the folds of the rugæ throughout its entire length and occasionally hæmorrhagic spots are seen in the walls of the canal. In the cervix we find marked changes. It is in all cases deeply congested, and pus is seen exuding from the cervical canal. Superficial ulcerations are occasionally observed on the anterior and posterior lip. In nearly all cases complaining of vesical tenesmus and burning sensation on urination urethral smears were taken and were, without exception, negative.

Treatment.—In addition to the common treatment of the condition—(a) irrigations, (b) instillations, (c) local applications, (d) vaccines, and (e) illumination of the vagina with the speculum and treatment of the parts locally—Barnet made use also of the electric endoscope. His method of treatment was as follows:—“(a) The external genitals are sponged off and the labia separated; (b) the Kelly endoscope is inserted as far as possible, the size of the endoscope depending on the size of the opening in the hymen and not on the age of the child. An endoscope of proper size should cause no pain—this is of the utmost importance. After one or two sittings the little patient will allow this procedure quite readily; (c) the obturator of the endoscope is withdrawn, the light inserted, and with no other manipulation than withdrawing the tube one-quarter to one-half inch the cervix presents at the distal end of the tube; (d) any secretion is then removed with the applicator, and iodine (Lugol's solution) is applied directly to the cervix and vaginal walls as the endoscope is slowly withdrawn. These endoscope treatments are carried out three times a week.

“*General Conclusions.*—The first important fact to bear in mind in treating this disease is the infection of the cervix and the difficulty of reaching this nidus of infection by the ordinary methods of treatment. Any infection of the cervix is difficult to treat because of its inaccessibility in the child. The simplest method of treatment, namely, irrigation of the vagina, is neither practical nor of great value. The affected parts are not reached directly, and the treatment must be continued for too long a period of time, and even then the results are unsatisfactory, because the solutions used in irrigation are not of sufficient strength. Direct applications must be made to the deep

point of infection, and this is the ultimate practical point of this paper. Cures can be obtained by the treatment of the cervix, as I have indicated, in a short period of time, and strong solutions can be applied to the cervix and vaginal walls directly without causing any pain."

PULMONARY TUBERCULOSIS IN CHILDREN.

During the past months several papers have been read at the "Société médicale des hôpitaux" in Paris respecting the primary point of infection in the lungs in these cases.

Sergent, Ribadeau-Dumas, Debré, Rist, and A. Weil have all brought forward evidence to show that the lower lobe of the lung is the part first attacked, and that the apex is only affected secondarily and owing to auto-infection. This process of infection is, however, rare during the first year of life, as at this time the powers of resistance to tubercle infection and to spread in the body are so small that a general infection is extremely common.

Charles Leroux ("La localisation initial de la Tuberculose Pulmonaire chez l'enfant et son évolution par étapes vers le sommet," *Arch. de Méd. des Enfs.*, September 1913), in continuation of his work on tuberculosis, is now confirmed in his previous opinions, and relying on the facts which he has observed in several hundred cases, believes that in the young child in the great majority of cases there are 3 clinical stages in the evolution of chronic pulmonary tuberculosis affecting the apex of the lung:—(1) The stage of infection of some part of the lung, usually the base or centre. (2) Stage of infection of the tracheal and bronchial glands. This stage is of very varying duration. (3) Stage of secondary infection of the apex of the lung.

1. *The Stage of Pulmonary Infection.*—The mother seeks advice because of the chronic bronchitis of her child. Clinically and by the use of the X-rays one discovers a patch of broncho-pneumonia at the base or middle part of the lung, or perhaps a basal pleurisy. Along with this condition of the lung there is almost constantly present infection of the bronchial glands, which frequently can only be made out definitely by the X-rays. In quite young infants the glandular infection is originally unilateral, and may remain so. Usually, however, it spreads more or less rapidly across to the glands of the other side. Unilateral glandular involvement becomes rarer as the child grows older, and bilateral involvement becomes more common. These older children (over 5 years) are already in the third stage—that of secondary infection of the apex of the lung.

In 32 cases of unilateral glandular involvement—

From 1 to 5 years	21 cases.
„ 6 to 10 „	10 „
„ 11 to 15 „	1 case.

In 153 cases of bilateral glandular involvement—

From 1 to 5 years	53 cases.
„ 6 to 10 „	75 „
„ 11 to 15 „	25 „

The use of the X-rays is necessary for accurate diagnosis. Some weeks or months after the primary infection the initial lesion is found to be cured—more or less entirely. The patch in the lung is cured clinically but the glandular infection remains.

2. *Stage of Glandular Infection.*—As a rule this glandular condition remains latent for months or years. It is important to remember that enlarged bronchial glands are often disclosed, by the use of the X-rays, which are not the seat of tuberculous infection. Tuberculous infection must be suspected, however, when the enlargement persists for a long time, and the clinical history of those suffering from them may vary widely. At present only those cases in which further involvement of the lung occurs are under consideration.

3. *Stage of Secondary Involvement of the Apex.*—In most cases this only occurs long after the glands have become infected. Thus although the primary pulmonary infection occurs in quite young children, it is usually not until after twelve or thirteen years of age that secondary involvement of the apex occurs. Apical tuberculosis is rare in the infant, and becomes more common as the child grows older. In 80 cases of pulmonary and glandular tuberculosis from 1 to 5 years of age apical tuberculosis was present in 7.5 per cent. In 182 cases from 6 to 10 years of age it was present in 53.2 per cent. In 116 cases from 11 to 15 years of age it was present in 77.5 per cent. In order to prove that this secondary auto-infection is a clinical reality, it is necessary to study the condition in children over prolonged periods. The author cites cases in support of this contention in which the children were under observation for many years. In these cases by means of clinical examination and X-ray photographs the spread of the disease could be determined. Besides this ((1) *Development towards the Apex*) we may also have

(2) *Spread from One Lung to the Other.*—In most cases in young children the involvement of the second apex follows after spread of the disease to the bronchial glands on that side.

(3) *Inverse Spread, Specially in Older Children.*—Occasionally apical tuberculosis is clinically primary and involvement of the glands secondary. This, however, is very rare in children under 10 years of age.

(4) *Gradual Improvement of Condition.*

Conclusions.—1. In infants and young children it is not in the apex but in the base or in the centre of the lung that one must look for the primary point of tuberculous infection in most cases.

2. To find this spot, clinical examination is insufficient, as there are

frequently no abnormal physical signs and one must have recourse to use of the X-rays.

3. The new-born and the suckling have very small powers of resistance to tubercle infection; it is only after 2 years of age or later that one can follow the development of the disease.

4. By repeated clinical and radiosopic examinations of the same child, during months or years, it is possible to follow the spread of pulmonary tuberculosis which almost invariably goes through three phases, more or less rapidly. (a) Pulmonary infection in some part of the lung—base, centre, or, more rarely, the apex; affection of the bronchial glands, at first unilateral, then bilateral. (b) Infection of the bronchial glands, more or less latent, during a period of months or years. (c) The phase of secondary infection of the apex and development of the classical symptoms of chronic pulmonary tuberculosis. This mode of development, though not the only one, is the most frequent and typical of tubercle infection in young children.

5. It is the early infection of young children, which, by delayed secondary infection of the apex, is the cause of much pulmonary tuberculosis in adolescence or even in the adult.

6. In older children, particularly those of 12 to 15 years of age, the inverse mode of development also occurs. In these cases, as in the adult, clinical examination and X-ray photographs would seem to show that the disease commences in the apex; the infection of the bronchial glands is here secondary or delayed. It occurs more frequently than in the pulmonary tuberculosis of the adult.

EIWEISSMILCH (ALBUMIN MILK).

Extensive clinical investigations among delicate nurslings have shown that sugar is the primary factor in the development of intestinal acid fermentation, and that fat is only affected secondarily. Further, it has been shown than casein in the food tends to control this condition by calling forth an alkaline reaction.

Basing their researches on such considerations, Finkelstein and Meyer devised the milk preparation "Eiweissmilch," which is composed of an admixture of buttermilk and curd which has been passed through a fine sieve, and has the following composition:—Protein, 3 per cent.; fat, 2·5 per cent.; sugar, 1·5 per cent.; salts, about 0·5 per cent.

Schwyzer at the Basle Children's Hospital has used this milk mixture in a series of cases and reports (*Corr.-bl. f. Schweiz. Aerzte*, 6th September 1913) as follows:—

1. *Dyspepsia*.—Cases of this nature were chiefly those of children under 1 year of age who had undergone previous treatment without benefit. For 6 to 24 hours, according to the severity of the case, nothing but tea and saccharin were given. Thereafter 300 grammes eiweissmilch was given per day along with tea, and every second day

100 grammes of eiweissmilch was added to the diet irrespective of the nature of the motions until the child was getting 180 to 200 grammes to each kilogramme of body weight. Sugar in the form of maltose was added until there was 4 to 5 per cent. present. In all cases the children did well from the beginning when dyspepsia only was the trouble and there was no intercurrent infection. It was found, also, that as they improved it was easy gradually to change the diet to a more natural one.

2. "*Dekomposition*" (*Atrophy*).—These children were with one exception 2 or 3 months of age, and all suffered from diarrhœa. Three hundred grammes eiweissmilch were given the first day, and as quickly as possible this amount was increased until the child was receiving 200 grammes for each kilogramme of body weight. Maltose was added up to 8 per cent. In all cases the children improved, and the feeding was gradually altered to diluted milk.

3. In cases of *alimentary intoxication*, and in cases where the digestive processes were disturbed secondarily, the same treatment was employed and with good results.

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DERMATOLOGY.

UNDER THE CHARGE OF

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RECENT RESEARCH IN PSORIASIS.

ALTHOUGH psoriasis is one of the commonest of skin diseases we are still in the dark as to its cause. In order to try to throw some light on the subject an extended investigation has been undertaken in Philadelphia under the direction of Schamberg. Associated with Schamberg are Kolmer as pathologist and bacteriologist, and Ringer and Raiziss as physiological chemists. These workers (*Journ. Cut. Dis.*, October 1913, p. 698) have attacked the subject from various sources and have arrived at some interesting conclusions. They found that nine out of 48 cases of psoriasis (*i.e.*, 18·7) per cent. gave positive Wassermann reactions, using an alcoholic extract of syphilitic liver as antigen. With antigens of cholesterinised alcoholic extracts of human and bovine heart over 28 per cent. of 22 cases reacted positively. From a clinical study of the patients whose sera were studied the positive tests cannot all be attributed to syphilis, although this might be true of a few of them; on the other hand, some significance must be attached to them which future research alone can reveal.

In order to get, if possible, a specific antigen, aqueous and alcoholic extracts of psoriasis scales and of a large number of cultures of organisms isolated from lesions were made. With these antigens complement fixation was not found to occur with 10 sera from active cases of psoriasis. These results would indicate that either the true