culosis of the vagina and cervix as compared with the uterus and tubes, for they say they should be more often the seat of the disease if infection follows the introduction of bacilli into the vagina. To recognise the fallacy of such an argument it is only necessary to consider the great rarity of tuberculosis of the mouth and pharynx, in which infection from without is the rule. It is probable that the disease cannot be produced unless the presence of bacilli in the vagina be associated with an injury to or a devitalisation of the cervical tissues as well as an inherited local predisposition to tuberculosis. The introduction of tuberculous material by Oncarani¹¹ into the vagina of rabbits, even if previously irritated by rubbing with tincture of iodine, never produced genital tuberculosis, but the animals usually died of general tuberculosis. Whitridge Williams,⁷ who conducted similar experiments, could not detect a trace of tuberculosis anywhere in the body when the animals were killed from four to six weeks later. Zweigbaum¹⁰ believes that chronic gonorrhoea predisposes the patient to tuberculous infection.

The period at which cervical tuberculosis most prevails is the period of maximum sexual activity—20 to 40 years of age. Genital tuberculosis may occur as early as ten weeks and as late as 83 years.⁷ The ages of the patients described in this communication are 63 and 36 years respectively, and they had borne children. As to its frequency some idea may be gathered from the fact that out of 119 cases of genital tuberculosis collected from the literature by Späth¹⁵ 6 were cases of cervical disease. Zweigbaum has collected 29 cases. At one time its occurrence was denied by Rokitsansky,¹² Lebert,¹³ West,¹⁴ and others, although the condition had been accurately described by Kiwisch² previously in 1854. The disease has, however, been thoroughly demonstrated and is now fully recognised, but unfortunately in some of our modern text-books it is only referred to in order to be dismissed with a few words either as a museum curiosity or a rarity of no importance to the clinician.

Great importance is to be attached to the correct diagnosis of cervical tuberculosis, inasmuch as the ulcerated variety may readily be mistaken for cancerous disease, and this error of diagnosis has actually been committed. Cornil and Zweifel¹⁶ record cases in which, hæmorrhage and suppuration being the symptoms, a diagnosis of carcinoma was made, and in one instance the uterus was removed *per vaginam* for a tuberculous ulcer of the cervix mistaken for carcinoma. By aid of the microscope Zweifel rectified his diagnosis before operating. The possibility of mistaking the two conditions must be always borne in mind by operators.

There are no signs or symptoms which can be considered pathognomonic save the detection of tubercle follicles and bacilli by the microscope. The honour of bringing this method of investigation into prominence belongs to Babes,¹⁷ who in 1883 demonstrated the presence of tubercle bacilli in vaginal discharges. As regards prognosis, all the authors consulted agree that it is grave, for the risk of general infection is always great. The treatment adopted has been various; some have successfully used iodine and iodoform, the ulcers healing up by granulations; others have trusted to curetting followed by the application of the thermo-cautery; whilst others have excised the ulcer and sutured the incised edges. Some, when reasonably sure that the disease was limited to the cervix, have amputated.¹⁸ The disease has a tendency to recur, and Zweigbaum's case, which was cured within three weeks of the application of the thermo-cautery, but died five months later of general tuberculosis of the lungs and intestines, is an example.

REFERENCES.

- ¹ Pollok: *Scrofula of the Uterus*. An abstract of 583 post-mortem examinations made at St. George's Hospital from 1841 to 1850 illustrating the pathology of the uterus, etc. Dublin Press, 1852.
- ² Kiwisch: *Tuberculose der Gebärmutter*. *Klin. Vorträge*, Bd. 1, 4. Aufl., Prag, 1854.
- ³ Courty: *Traité Pratique des Maladies de l'Uterus*, 2 ed., 1872.
- ⁴ Schramm: *Zur Kenntniss der Eileitertuberculose vom path. anat. Standpunkte*. *Archiv f. Gyn.*, Bd. xix, 1882.
- ⁵ Cornil: *Sur la Tuberculose des Organes Génitaux de la Femme*. *Etudes Experimentales et Cliniques sur la Tuberculose*, Vernet, 1888, f. ii.
- ⁶ Zweigbaum: *Tuberculouser Geschwür der Vulva, Scheide und der Vaginalportion*. *Centrabl. f. Gyn.*, 1888, p. 494.
- ⁷ Whitridge Williams: *Johns Hopkins Hospital Reports*, vol. iii, 1892.
- ⁸ Ballantyne and Williams: *Structures in the Mesosalpinx*, 1893.
- ⁹ Oliver and Boyd.
- ¹⁰ Haidenthaler: *Wien. klin. Wochenschr.*, No. 34, 1890.
- ¹¹ Zweigbaum: *BRITISH MEDICAL JOURNAL*, 1889, vol. i, p. 93.
- ¹² Oncarani: *Revista di Obstetr. e Ginec.*, 1890, No. 21, e. 22.
- ¹³ Referat: *Centrabl. f. Gyn.*, 1891, p. 553.

- ¹⁴ Rokitsansky: *Tuben-Tuberculose*. *Lehrbuch der path. Anat.*, iii. Aufl., Bd. iii, 1861.
- ¹⁵ Lebert: *Ueber Tuberculose der weibl. Genitalien*. *Arch. f. Gyn.*, Bd. iv.
- ¹⁶ West: *Op. cit.*, p. 361.
- ¹⁷ Späth: *Ueber die Tuberculose der weibl. Genitalien*. *Diss. inaug.* Strassburg, 1885.
- ¹⁸ Zweifel: *Lupus Uteri*. *Klinische Gyn.*, 1892.
- ¹⁹ Babes: *Bull. Soc. Anat. de Paris*, 1883.
- ²⁰ Hegar: *Die Entstehung, Diagnose und chirurgische Behandlung der Genital-Tuberculose des Weibes*, Stuttgart, 1886.
- ²¹ Ein Fall von tuberculöser Ulceration der Vulva, Vagina, und der Portio vaginalis Uteri. *Berl. klin. Wochenschr.*, 1888, xxv, pp. 443-448.

TUBERCULOSIS OF THE TONSIL.

By J. PURVES STEWART, M.A., M.B., C.M. EDIN.,

Practice of Physic Laboratory, University of Edinburgh.

THE presence of tubercle in the tonsil has hitherto been regarded to be of such rare occurrence that the following case seems worthy of being placed on record.

With the clinical history of the case I am not familiar, as the case was a private one under the care of Sir Thomas Grainger Stewart, who sent the specimens to me for microscopic investigation. I understand, however, that the case seemed to be merely one of ordinary chronic enlargement of the tonsils, with pharyngeal adenoids, associated with post-scarlatinal otorrhoea and enlargement of cervical lymphatic glands, in a child aged about 10. The scarlet fever occurred about two and a-half years ago, prior to which the child was absolutely healthy in every respect. There was no history of tubercle in the family.

The tonsils, on naked-eye examination, in no way differed in their appearance from ordinary chronically enlarged tonsils. The tonsillar crypts were unusually well marked, and here and there admitted the point of an ordinary probe.

On microscopic examination, however, the following appearances were found: The lymphoid tissue of the tonsil, covered on its surface by stratified squamous epithelium, was seen to be much subdivided by the dipping down of folds of epithelium, forming crypts, in which lay masses of amorphous debris containing numerous micro-organisms (see figures). Scattered through the substance of the lym-

Fig. 1.—From a photograph by Dr. R. A. Fleming. About 125 diameters magnification. At upper left hand quadrant of the section a tonsillar crypt is seen filled with amorphous debris, and lined by squamous epithelium. In lower right hand quadrant three giant cells are seen amongst the lymphoid tissues of the tonsil.

phoid tissue were large numbers of tuberculous giant-cell systems, apparently most numerous close beneath the epithelial surface of the tonsil. These giant cells were of the typical multinucleated form characteristic of tubercle, surrounded by the usual epithelioid and lymphoid cells. There was no overgrowth of connective tissue around these areas, nor, indeed, anywhere in the tonsil, but the stroma of the gland seemed here and there to have undergone hyaline

degeneration. Staining by Ziehl-Nielsen and Gram's methods failed to demonstrate any tubercle bacilli in the sections.

Fig. 2.—From a photograph by Dr. R. A. Fleming. About 750 diameters magnification. Part of the same section as photograph No. 1, showing giant cells.

The pharyngeal adenoids on section were found free from tubercle, and consisted simply of lymphoid tissue, covered by a layer of the columnar epithelium of the nasopharynx. Some enlarged cervical lymphatic glands were subsequently removed from the same patient, and these on section showed typical tuberculosis in various stages of advance, from simple enlargement to caseation.

This case seems to show that the tonsil is more important as a channel of tuberculous infection than has hitherto been supposed; and when we regard the frequency with which it is attacked, and attacked successfully, by pyogenic organisms, it is not to be wondered at that the tubercle bacillus sometimes enters it and flourishes in its lymphoid tissue, a tissue which is *par excellence* a seat of tuberculous deposit.

THE TRANSMISSION OF DIPHThERIA BY NON-SUFFERERS.

By HERBERT PECK, L.R.C.P. EDIN., D.P.H. CANTAB.,
Medical Officer of Health to the Ormskirk Rural District Council.

THE following series of cases is of interest, as showing the possibility of the conveyance of the diphtheria poison by persons who do not themselves suffer from the disease:

HOUSE A.—Case 1.—R. H., aged 45, began to be ill on October 4th, 1894. The case was typical, and was followed by double "drop-wrist." No other person in this house suffered from sore throat.

HOUSE B.—This is half a mile distant from A. There was no communication between the houses till December 26th, when the occupier began to work for R. H. Case 2.—E. J., aged 7½ years, had a sore throat on or about January 2nd, 1895. The case was a typical one, followed by paralysis of both legs. The patient died from cardiac syncope. Case 3.—E. J., aged 4 years, began to be ill on February 6th. This was a typical case, and resulted in death from asphyxia. Case 4.—J. J., aged 12 years, had a sore throat on February 16th. The case was typical, and was followed by dimness of sight and strabismus. Bacteriological examination of cultures from the throat showed the presence of large numbers of diphtheria bacilli.

HOUSE C.—This farm house stands on a peatmoss, and is 1½ mile distant from houses A. and B. Case 5.—R. J., aged 18, brother of the last three patients, worked here from

January 15th. His mother stated that he was at home for a few minutes on the days his sisters were buried, but at no other time. He himself admitted having been home on each Sunday to change his shirt, which he did in the room occupied by the patients. He stated that he did not suffer from sore throat at any time, but bacteriological examination showed typical diphtheria bacilli in large numbers to be present in the throat. There is no history of his ever having had diphtheria. Case 6.—J. C., aged 18, began to be ill on February 26th. He worked on the same farm as the last youth, and slept with him. He went home to House D. on February 27th, being then "full of cooth," and suffering from sore throat, and unable to work. Typical diphtheria bacilli were present in great abundance on March 15th.

HOUSE D.—This is 1½ mile distance from House C., two miles from B., and 2½ miles from A. Case 7.—J. C., aged 13, slept with the last patient, his brother. He came home from chapel on March 3rd, complaining of sore throat. On March 8th he was seen for the first time by his medical attendant, and was then dying. No bacteriological examination was made. Case 8.—E. C., aged 3 years, sister of the last two patients, began to be ill on March 12th. The case was a typical one, and an abundance of typical diphtheria bacilli was found on bacteriological examination.

REMARKS.—House B. was probably infected by the father of the family, who himself did not suffer from the disease. His son, Case 5, did not suffer from the disease, though he was proved to have its germs in his throat, but he was the means by which it was carried to House C., whence it was taken to D.

AN UNUSUAL CONDITION OF THE PILLARS OF THE FAUCES, PROBABLY CONGENITAL.

By ROBERT FULLERTON, M.D.,

Surgeon to the Outdoor Department for Diseases of Throat and Nose
Glasgow Royal Infirmary; Lecturer on Diseases of Throat and Nose
in St. Mungo's College; etc.

THE following case presents certain features which may be deemed sufficiently interesting to warrant publication:

The patient, a married woman, 29 years of age, consulted Dr. Monro at the Medical Dispensary of the Glasgow Royal

Infirmary in March last year, on account of a catarrh of the