of this hemiageusia. Blunting of sensation over the left side of the forehead and cheek was still present. He remained in hospital for several weeks and made a complete recovery. The sensory changes persisted for a few more days: the hemiageusia disappeared between the nineteenth and twenty-third days of the illness, while the facial paralysis had practically gone three weeks after its appearance.

Case 6.—While the above five cases of herpes zoster were in hospital I saw a case of Bell's palsy in the out-patient department. It was a typical peripheral facial paralysis in all respects and there had been no pain or rash or general reaction. The man made a good recovery within a month. He was employed in the same unit as the first patient (Case 1), and I learned that there had been two or three other instances of herpetic eruption there. Cases 2, 3, and 4 came from separate units, but their quarters were adjacent. I saw several other cases of herpes zoster from the same unit as Case 5. The observation of Case 6 during the height of the epidemic becomes significant when it is stated that only two instances of Bell's palsy have been seen at this hospital during the past twelve months. The second occurred in September, 1940.

Commentary

The first interesting feature of these cases was the development in one of them, on the eighth day, of an ipsilateral facial paralysis. The herpetic eruption was confined to the second and third divisions of the trigeminal nerve, but there was diminished sensation to touch and pain over the first division. *No auricular zoster developed.* Undoubtedly, then, the herpes virus had invaded both the Gasserian and geniculate ganglia. The former resulted in the facial eruption and the latter in the facial paralysis. Whether these manifestations appeared in order of the involvement of these structures can only be surmised. We do not know what interval elapses between the time of infection of the ganglion cells and the appearance of the rash, but it is quite possible the virus attacked the geniculate from the Gasserian ganglion by way of the superior superficial petrosal nerve. It was not until the infection reached the cell stations in the geniculate ganglion of the fibres of the chorda tympani nerve that taste was affected.

The absence of auricular herpes is especially interesting. It indicates that herpetic invasion of the geniculate ganglion can take place without any cutaneous manifestation in the distribution of its sensory fibres. Facial palsy may be the only sign. Hemiageusia would probably be a more frequent sign in facial paralysis due to geniculate ganglionitis than in that due to a lesion arising at the stylomastoid foramen.

Another interesting feature was the isolated occurrence in the same unit as one of the herpes zoster patients of a typical Bell's palsy; this suggests a common aetiological agent. The possibility of coincidence cannot, of course, be denied, but it remains that this case of Bell's palsy was the only one observed at the hospital for a period of nine months. When considered in the light of Case 5—in which zoster and facial paralysis were present simultaneously—the suggestion of a virus origin of Bell's palsy becomes highly probable.

Such findings suggest the possibility of analogous lesions in other sensory nerves. The abortive nature of the rash in Case 4 brought to mind the condition of intercostal neuralgia, and the lumbar neuritis in Case 3 suggested a diagnosis of meralgia paraesthetica during the week preceding the rash. Some cases of facial neuralgia may be due to herpetic Gasserian ganglionitis.

Summary

In a small outbreak of herpes zoster one case of combined trigeminal and geniculate zoster was encountered. It was characterized by facial herpes and an ipsilateral facial palsy. The former preceded the latter by five days. No auricular or

faucial herpes developed. Facial paralysis and hemiageusia were the only signs of geniculate involvement. During this zoster epidemic there occurred the only instance of Bell's palsy seen at the hospital for a period of nine months. The patient came from the same unit as one of the zoster cases.

This evidence supports the view that some cases of Bell's palsy are due to herpetic infection of the geniculate ganglion.

REFERENCES

- Aitken, R. S., and Brain, R. T. (1933). *Lancet*, 1, 19.
Hunt, J. R. (1907). *J. nerv. ment. Dis.*, 34, 73.
Walshe, F. M. R. (1940). *Diseases of the Nervous System*, 1st ed., p. 214, Livingstone, Edinburgh.

AN OUTBREAK OF TRICHINIASIS IN WOLVERHAMPTON AND DISTRICT

A CLINICAL ACCOUNT OF SEVEN CASES

BY

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Acute trichiniasis is produced by the embryos of *Trichinella spiralis* during their migrations from the human intestine to the voluntary muscles, and, though extremely rare in Great Britain, the disease is not uncommon in America and Germany. The life history of the parasite is adequately described in the standard textbooks, and, as is well known to medical practitioners and students, infection in man is acquired by eating raw or undercooked pork. The clinical features of the cases described in this article were distinctly unusual and caused some difficulty in diagnosis. Nephritis, pneumonia, renal damage, influenza, pyrexia of unknown origin, suspected enteric fever, and pyelitis were the conclusions arrived at before admission of the patients to New Cross Hospital.

The predominating signs and symptoms consisted of oedema of the eyelids, headaches, conjunctival haemorrhage or injection, mental torpor with lethargy, drowsiness, confusion, and slowed cerebration, heaviness in the limbs, generalized aches and pains, muscular tenderness and stiffness, disturbances of reflex action, paresis, and severe constipation. Vomiting occurred at the outset in two cases and colic in one. My colleagues and I were aware that we were confronted with a distinct clinical entity which was hitherto unknown to us. Blood urea investigations were carried out in the early cases and yielded results which fell well within normal limits. Examination of the blood was next decided upon, and the presence of eosinophilia was discovered. The patients were then seen in consultation with Dr. J. H. Sheldon, consulting physician to New Cross Hospital, who put forward a tentative diagnosis of trichiniasis.* Clinically this disease is generally described in three stages in accordance with the life history of the parasite. Carmichael Low and Hamilton Fairley (1933) state that for the first week during the invasion period gastro-intestinal symptoms develop, with nausea, vomiting, colic, and diarrhoea with perhaps blood and mucus; then when migration of larvae begins myositis of the tongue, laryngeal, and intercostal muscles, and the diaphragm occurs, giving rise to difficulty of swallowing, speech, and respiration. The muscles of the jaws, arms, legs, and abdomen may also be involved, with stiffness and pain; the affected areas are extremely tender and hard to the touch. Oedema, especially of the face, urticaria, leucocytosis with high eosinophilia, prolonged remittent fever (102° to 104° F.), and sweating are said to be characteristic. Cachexia and subcutaneous oedema

* A preliminary account of the present epidemic is given by Dr. Sheldon in the current issue of the *Lancet* (February 15).

and finally, during the period of larval encystment, death may take place from toxæmia, with respiratory disturbance and coma. The fact that many of these symptoms were not shown by the patients under consideration threw doubt upon the diagnosis, and the high incidence of the disease in women also caused suspicions to be directed elsewhere for a time. However, on January 24 biopsy of the pectoral muscle was performed, and the diagnosis was established by the identification of the coiled-up embryos of *Trichinella spiralis* in the characteristic lemon-shaped areas. There was little or no capsule formation, and Dr. Paul B. Beeson of Harvard, who was shown the specimen and confirmed the diagnosis, was of the opinion that the parasite had only just reached the muscle. On January 27 further confirmation was obtained when another successful biopsy was performed.

Case I

A previously healthy 21-year-old married woman noticed puffiness of her eyelids on waking on the morning of December 22, 1940. On the same day she developed severe temporal headache and pain in the left loin. The temperature was normal; there was no cough and no diarrhoea. Vomiting occurred once daily from December 23 to 25 inclusive, and aching pains in the limbs supervened during the same period. Insomnia was present on December 25 and 26. The swelling of the eyelids and the aching pains in the limbs persisted, and she was admitted to hospital on December 28.

Examination showed marked puffiness and swelling of the eyelids and injection of the conjunctival vessels, and the facies was that of a woman twice her age. The only other abnormal physical signs present were a few crepitations in the left lung. There were no abnormal constituents in her urine; the blood pressure was 126/84, the temperature 99°, the pulse 104, and the respirations 24; the blood urea was 37 mg. per 100 c.cm. The mental attitude was distinctly unusual; she complained of feeling "all fuddled," took no interest in her surroundings, and felt very miserable. She showed signs of impairment of memory, and appeared to be dazed and somewhat confused.

Gradual improvement took place, and she was discharged from hospital on January 11, 1941, free from symptoms.

Case II

A housewife aged 36 years developed severe headache, backache, and pains in the left groin on the morning of December 19, 1940. During the afternoon of the same day she observed that her eyelids and the upper part of her face were becoming puffy and swollen. The swelling of the eyelids continued to increase slowly, and aching pains appeared in the limbs and neck on December 21, when the arms felt too heavy to lift, and all her muscles ached to a severe degree even when moving. In spite of her illness she left home to do some shopping, and on returning home in a low-spirited and depressed condition the severity of the headache and backache together with the tiredness of the limbs was such as to cause her to drop into a chair in a fainting condition. There was no history of diarrhoea.

On admission to hospital on December 22 the patient appeared to be in a state of abject misery, was obviously ill, and had extensive swelling and puffiness of the eyelids together with conjunctival haemorrhages. The oedema of the eyelids was sufficient to interfere with vision, and she was unable to see a coin placed in her hand; the temperature was 100°, the pulse rate 120, and the respirations 24. Areas of tenderness were present in both loins, in the back, and to a less extent in the abdomen. Stiffness of the neck, which was most noticeable when she sat up, occurred on December 22 and lasted for three days. Vomiting was present on the second and fourth days after admission; the urine was normal and the blood pressure was 160/110. The patient's mental attitude was abnormal; there were evidences of confusion and slowed cerebration, and when addressed she had to think for some time before she was able to understand what was required of her.

During the night of December 26 loss of power in the left leg supervened, and next morning this limb could not be

moved, being described by the patient as heavy and numb. This paresis persisted for twenty-four hours, after which gradual improvement took place. The knee-jerks and ankle-jerks were present; the left plantar reflex was practically absent, and the right easily flexor.

Constipation was pronounced and insomnia troublesome during the first week in hospital. The blood urea was 33 mg. per 100 c.cm. and the urea-clearance factor 88% of normal. Discharge from hospital took place on January 11, 1941, when the patient was free from symptoms.

Case III

A married woman aged 29 years became ill on December 22, 1940, the initial symptoms being supra-orbital headache and swelling of the eyelids. She sought medical advice and was thought to have nephritis. On December 24 the swelling of the eyelids became much worse—the face and forehead were affected; the head felt much larger than normal, and headache assumed a violent character. Abdominal aches and pains next developed; there was no vomiting and no diarrhoea, and the urine was stated to be scanty and dark in colour.

On admission to hospital on December 25 pronounced oedema of the face, eyelids, and frontal area of the scalp, together with chemosis and conjunctival haemorrhages, was noted. The temperature was 102°, the pulse rate 120, and respirations 24; stiffness of the neck and some muscular tenderness were also present. The urine, which was normal on admission, contained a large amount of albumin on December 28 and 29, and albuminuria reappeared on January 1, persisting for six days.

Loss of power in the left arm and to a less extent in the right supervened on December 29, and this paresis, which was not a true paralysis, persisted for three days. During meal-times, while using a fork, evidence of true incoordination in the left arm was noted. Drowsiness and lethargy developed on December 31, cerebration became slow, the memory was impaired, and mental confusion existed; finding everything an effort, the patient felt miserable. This state of mental torpor continued for four days, during which time she did not recognize her husband and showed a complete lack of interest in her surroundings. Low pyrexia of an irregular type continued for eleven days, and severe constipation necessitated enemata and aperients. The urea-clearance test showed the blood urea to be 40 mg. per 100 c.cm., and the urea-clearance factor was 100% of normal.

Convalescence was gradual, and the patient was discharged on January 14, 1941, free from symptoms.

Case IV

A housewife aged 36 years had a cold in the head on December 16, 1940, and three days later sought medical advice on account of swelling of her face, eyes, and lips. Violent headache set in simultaneously, being accompanied by severe pains in the lower abdomen, most pronounced in the left iliac region. Retention of urine and complete constipation occurred on December 19 and 20. Weakness of the left hand appeared on the third day of her illness; there was no history of diarrhoea.

On admission the clinical picture was that of uraemia: drowsiness and lethargy were extremely well marked; inability to sit up in bed existed for two days after admission; slight oedema of the upper part of the face and eyelids was still visible; and retention of urine, lasting for four days, was present, catheterization being necessary. The urine contained a trace of albumin, which disappeared in the course of a few days; the blood pressure was 104/90, and severe constipation called for treatment.

There was paresis of the left hand; the grip was weak, incoordination was detected by the finger-nose test, and with the exception of the biceps-jerk all the left arm reflexes were absent. The right arm reflexes were sluggish, both knee-jerks were practically absent, and the plantar reflexes were flexor. No muscle tenderness was elicited, and there was no disturbance of joint sense. The blood urea was 46 mg. per 100 c.cm., and the urea-clearance factor 160% of normal.

Convalescence was uninterrupted, and the patient returned home on January 15, 1941.

Case V

A housewife aged 37 years complained of severe headache, giddiness, and swelling of the eyelids on December 14, 1940. Heaviness of the legs developed at the outset of the illness; they seemed to droop when attempts were made to raise them, and felt as if they were made of lead. To a minor extent similar sensations were experienced in both arms. Oedema of the eyelids persisted for some time, and on December 18 was remarked upon by a relative. Vomiting started on December 20 and ceased on December 24; pyrexia, sweats, and loss of memory were present, but no abdominal pains and no diarrhoea.

On admission to hospital on December 28 the clinical picture was that of tuberculous meningitis; some degree of coma, with signs of meningeal irritation, cervical rigidity, and slight head retractions, was noted. At intervals the patient gave vent to a peculiar high-pitched piercing "meningeal" cry, of which she was conscious. Kernig's sign was positive on both sides; the right plantar reflex gave an extensor response, whereas the left was flexor; the abdominal and ankle reflexes were absent, the knee-jerks practically so, and examination of the optic disks revealed slight papilloedema. The skin was moist, the face puffy, and incontinence was present.

Lumbar puncture revealed clear colourless fluid, very scanty lymphocytes only in films—1 cell per c.mm.—chlorides 710 mg. and protein 10 mg. per 100 c.cm., and globulin within normal limits. The temperature was 101°, the pulse rate 120, respirations 26, the blood pressure 100/80, and the blood urea 35 mg. per 100 c.cm.; the urine contained no abnormal constituents. The hands and legs became oedematous on December 29, and three days later considerable muscle tenderness was present, pinching of the calves causing the patient to flinch even though she was incapable of answering questions. Both plantar reflexes were now extensor; the legs were drawn up, and she appeared to be gravely ill. This stage of meningeal irritation passed off gradually; control of the sphincters was regained on January 4, 1941, but drowsiness and lethargy remained for a time.

Examination on January 9 revealed no nystagmus; the disks were normal, and the pupils equal and reacting; the arm muscles were feeble and all reflexes absent, and there was a gross incoordination of the arms with severe dysidiadokokinesia, suggesting a cerebellar lesion. Joint sense was normal in the arms but absent in the legs; the knee-jerks were sluggish and the ankle-jerks were absent; the left plantar reflex was flexor and the right plantar reflex doubtful. The heel-shin test was badly executed and the abdominal reflexes were absent. Constipation was extremely troublesome in spite of aperients and enemata.

By January 16 the patient was greatly improved and her mentality was normal; muscle power in the arms was normal, but there was still incoordination in the right arm; oedema of the left foot and leg was present, the knee-jerks were sluggish, and the plantar reflexes were flexor. A week later constipation still persisted and some degree of faecal impaction occurred; there was considerable loss of postural tone on holding the arms outstretched, and gross incoordination of the right arm with some degree of dysidiadokokinesia; the arm reflexes were slightly increased, and all others were normal. On January 24 biopsy revealed the presence of the embryos of *Trichinella spiralis*. Atrophy of the extensor muscles of the right thigh and calf muscles was noted on January 29; nystagmus was also present for the first time. The patient was unsteady when she sat up and appeared to have some degree of ataxia, which, together with other findings, suggested a cerebellar lesion.

Case VI

A 36-year-old labourer became ill on January 4, 1941, with severe persistent headache and irritability. He avoided conversation with others, resented being disturbed, and retired to bed on account of general weakness. On the 9th he was told that his face was swollen, and next morning he complained of heaviness of his right leg, which was swollen and puffy. Drowsiness supervened and an attack of acute gastro-enteritis lasting for twenty-four hours ensued.

On admission to hospital on January 14 difficulty was experienced in obtaining an accurate history owing to the

mental torpor which existed; cerebration was slow, the memory was impaired, and the patient, who appeared to be somewhat bewildered, wore a strange and puzzled expression. He was lethargic, drowsy, disoriented, and his speech was rambling in character. Haemorrhages into the distal end of the finger-nail beds taking the form of crescentic bands of ecchymosis were noted, together with conjunctival haemorrhages and oedema of the eyelids and the right leg. The temperature was 101.4°, the pulse rate 112, and respirations 20; the urine contained abundant albumin, and muscle tenderness was detected in the arms, calves, shoulders, and the right intercostal spaces. Good muscle power was present in both arms, some incoordination of the right arm was shown by the finger-nose test, and with the exception of the right biceps-jerk all arm reflexes were absent. The knee-jerks were sluggish, the plantar reflexes normal, and the muscle-joint sense was somewhat impaired in both legs. The heel-knee test revealed slight incoordination in the right leg, and Kernig's sign was positive on both sides.

Lumbar puncture revealed colourless fluid, scanty lymphocytes in films—1 cell per c.mm.—chlorides 700 mg. and protein 20 mg. per 100 c.cm., and globulin within normal limits. A search for the larvae of *Trichinella spiralis* in the cerebrospinal fluid was unsuccessful. During the first week in hospital constipation was marked and the tongue was dry; the mental confusion continued, the headache gradually diminished, and the mild pyrexia subsided; urinary incontinence occurred on two occasions. Biopsy of the pectoral muscle was performed under local anaesthesia on January 27 and the coiled-up embryos of *Trichinella spiralis* were identified.

Case VII

On January 18, 1941, a married woman aged 36 years was seized with pain in the right loin which travelled into the right side of the abdomen and then became generalized. The pain persisted, and vomiting occurred on January 20 and continued. On the next day severe supra-orbital headache developed, accompanied by knife-like pains down both sides of the face; the face became slightly swollen, leg pains appeared, but there was no diarrhoea. She was admitted to hospital on January 23, and was said to be suffering from pyelitis.

The temperature was 102°, pulse rate 120, respirations 18, and there was pronounced tenderness, with some degree of resistance, in the right loin and lower abdomen. Slight oedema of the eyelids and mild injection of the conjunctival vessels were observed; muscle tenderness was present in the calves and shoulders, but there was no paresis. Leg reflexes were normal, but all the arm reflexes were diminished. The urine contained a trace of albumin, a few pus cells, and very scanty *B. coli*; these findings did not appear sufficient to account for the illness, and questioning failed to elicit any urinary symptoms. Puffiness of the eyelids and conjunctivæ became more marked during the first two days in hospital, and the temperature returned to normal by lysis four days after admission. The leucocyte count revealed an eosinophilia of 24%.

Table enumerating the Leucocytes

Case	Date	White Cells per c.mm.	Poly-morphs %	Lympho-cytes %	Eosino-phils %	Mono-cytes %	Baso-phils %
I	31/12/40	5,200	63	26	8	3	
	9/1/41	9,600	64	25	7	4	
II	31/12/40	14,800	73	13	11	3	
	9/1/41	11,600	73	19	8		
III	30/12/40	19,400	85	12	2	1	
	9/1/41	6,100	57	39	1	3	
IV	31/12/40	12,000	79	14	7		
	9/1/41	12,400	68	27	3	2	
V	30/12/40	11,800	84	12	3	1	
	9/1/41	9,200	70	20	9	1	
VI	23/1/41	15,000	43	22	33	1	1
	15/1/41	16,400	43	6	49	2	
VII	27/1/41	11,600	74	16	5	3	2
	27/1/41	12,000	61	13	24	2	

Summary and Conclusions

Seven cases of acute trichiniasis presenting atypical features have been described and attention has been drawn to the manner in which this disease may simulate nephritis,

uraemia, tuberculous meningitis, and pyelitis. The outstanding symptom in all cases was oedema of the eyelids, and this, in conjunction with the presence of eosinophilia, may be regarded as diagnostic. The abnormal mental state appears to have been inadequately described in the past, and is worthy of special note. Haemorrhages into the conjunctivae and nail-beds constitute strong supporting evidence, and these signs appear to be attributable to larval embolism. Definite indications of involvement of the central nervous system were observed, and in one case the clinical signs suggested a cerebellar lesion, possibly also of embolic origin. Muscle tenderness was present in most cases, and a surprising feature was the existence of constipation, which was exceedingly troublesome and resulted in faecal impaction on one occasion.

I desire to express my thanks to Dr. J. H. Sheldon, consulting physician, New Cross Hospital, Wolverhampton, for his co-operation and help; to the resident medical officers for their clinical assistance; and to Mr. K. R. Vasey.

REFERENCE

Price, F. W. (1933). *Textbook of Medicine*, Oxford Medical Publications, p. 359, London.

TRICHINIASIS IN HERTFORDSHIRE

BY

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The following brief account of some cases of trichiniasis recently diagnosed in Harpenden, Herts, may be of service to others called upon to recognize this disease.

Information that trichiniasis had appeared in this country reached one of us on February 1; in the practice of the other there had been several cases presenting unusual features, of which the most arresting was oedema about the eyes. A connexion between these facts was suspected, and blood films from two of the cases were examined forthwith. Each showed an extreme eosinophilia. Five typical cases were then investigated further. Their clinical histories are as follows:

Case Histories

Case 1.—Female aged 44. Had been feeling ill for three days before January 23, when she first noticed puffiness of the eyes and had general muscular pains; she also complained of severe temporal headache. On January 24 her temperature was 101° and her pulse 100; she had a harsh barking cough and marked oedema of the eyelids. Physical examination revealed nothing else abnormal, and there was no albuminuria. Fever of 99° to 101.6° has now persisted for sixteen days; muscular pain, chiefly affecting the calves of the legs, neck, and shoulder girdle, is now diminishing. She also complains of vague abdominal discomfort, sometimes amounting to pain.

Case 2.—Male aged 36. Onset on January 21 with swelling of the eyelids and face, temporal headache, and pain, particularly in forearms and legs. No abnormal physical signs except muscular tenderness; no albuminuria. Fever persisted for three or four days, muscular pain for about ten days, accompanied later in the forearms by oedema. Recovery complete in a fortnight.

Case 3.—Female aged 34, the wife of the foregoing patient. Had an illness with identical features at the same time, but was less ill; continued her ordinary life, and was neither examined nor treated.

Case 4.—Male aged 53. Onset on January 31, with oedema of the eyelids; no headache and no muscular pain. On February 1, temperature 100°, well-marked oedema of the

eyelids; physical examination otherwise negative; no albuminuria. Temperature since has varied between 99.6° and 101.6°, and some muscular stiffness and a feeling of ill-being have developed: this attack has now lasted eight days and continues.

Case 5.—Female aged 44. Had a headache for two days before January 21, when her eyes became puffy and she had pain in the muscles of the neck, arms, and legs, and some vague abdominal discomfort. First seen on January 23, when she had a temperature of 100° and marked oedema of the eyelids. Physical examination negative; no albuminuria. Pain and a feeling of ill-being lasted for ten days, by which time the oedema had also nearly subsided. She was quite well within a fortnight.

Pathological Investigations.—Differential leucocyte counts gave the following results:

	No. of Days since Onset	W.B.C. per c.mm.	Percentage of Eosinophils	Eosinophils per c.mm.
Case 1	12	13,400	28	3,752
Case 2	14	8,000	27	2,160
Case 3	14	11,600	27.5	3,190
Case 4	5	12,000	31	3,720
Case 5	14	17,800	47	8,366

There was thus a pronounced eosinophilia in all cases, although in one the duration of the disease had been only five days, and in three the attack had been brief and was clinically over when the counts were made.

Muscle biopsy was performed in three cases, small pieces of the deltoid being removed for us under local anaesthesia by Mr. Michael Harmer, whose help we gratefully acknowledge. In Cases 2 and 5 no embryos were present, but a single coiled embryo lying among the fibres was discovered in the specimen from Case 1. These examinations were made on the same day of the disease as the blood counts.

In Case 4, the most recent, two stools passed after 4 grains of calomel were examined for adult worms with no result, and in 10 c.cm. of blood lysed in an excess of distilled water and centrifuged no embryos were found.

Dietetic History.—All these patients could recollect having eaten sausages during the fortnight preceding the onset of their illness. Two of them had been in Birmingham and one in London during this period, and might have acquired the disease there; but its local origin is certain in Case 5—this patient having had no meals away from home—and particularly in Case 3, which patient had not only been continuously at home but had admitted having eaten two locally bought sausages raw on or about January 14. Her husband, Case 2, ate four of the same sausages cooked.

Other Cases.—One of us (D. M.) has seen several similar cases, all during the last three weeks of January, in which no laboratory investigations were made. We mention in passing that one of these patients gave blood for transfusion on the day before his illness became noticeable: the number of embryos so transmitted would be small, but it should presumably be recognized as inadvisable that anyone suspected of having trichiniasis should act as a blood donor. It is not assumed that these were necessarily cases of the disease, and, indeed, we have reason for believing that the features of mild trichiniasis may be imitated by some other condition. A man complaining of fever and headache, who three days later developed conjunctival oedema but no muscular pain or other complaint, had an eosinophil count of only 132 per c.mm. on the sixth day after the onset. He had eaten sausages on several occasions, and his may be a case of trichiniasis in which eosinophilia has failed to develop. This explanation is almost impossible in another case under the care of Dr. K. H. C. Hester, to whom we are indebted for permission to mention it. She is a woman aged 48 who has developed marked oedema of the eyelids in association with a febrile illness having no other localizing features except upper respiratory tract catarrh. Not only is her eosinophil count merely 56 per c.mm., but she is a strict vegetarian, and close questioning has brought to light not even the possibility that she might have consumed meat in a sandwich without knowing what it was.