TRICHINOSIS COMPLICATING PREGNANCY*

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PYREXIA during labor and the early postpartum period is a frequent occurrence and occasionally may be a prelude to a serious obstetric complication. The obstetrician is prone to consider lightly a slight elevation in temperature because many times the common cold, laryngitis or lesser infectious conditions may be the source. One must not fail to consider such frequent and oftentimes serious obstetric complications as: amnionitis, cystitis, pyelitis, dehydration, phlebitis and puerperal sepsis. If one keeps in mind the more common complications, he is apt to recognize the unusual conditions causing pyrexia. Some of those to be considered are acute and subacute bacterial endocarditis, malaria, leukemia and Hodgkin's disease. Recently we were confronted with a case of trichinosis which complicated pregnancy at term, the outstanding symptom being merely an elevated temperature.

Human trichinosis in itself is an interesting and infrequent condition but it is a rare complication in pregnancy. It is an acute condition caused by the Trichinella spiralis acquired by ingestion of infected meat. The disease is characterized by remittant fever, edema of the face, pain and soreness in the muscles, and emaciation. It is difficult to determine the prevalence of trichinosis because the mild cases do not receive medical attention; others are not recorded and still others are left undiagnosed. In an unselected series of autopsies 20 per cent were found to possess trichinosis in the diaphragm. Of course, only rarely, was the T. spiralis abundant enough to give clinical symptoms. After infected meat is eaten, the cyst wall of the trichinella is digested in the stomach and the worm is liberated, and thus passes into the small intestine. There it grows to maturity in two to three days. The female is then fertilized and about the seventh day it penetrates into the mucosa of the intestine. The embryo then escapes and lodges in the tissues of the small intestine, thence it proceeds into the lymph spaces of the mucosa and submucosa. The embryos are delivered over a period of about six weeks. From the lymph spaces the embryo is found in the muscle on about the tenth day; here it grows rapidly and completes its development in fifteen days. Then about one month after the infection begins it proceeds to coil and encyst. It may continue to live for twenty to thirty years.

A clinical condition of gastrointestinal disturbance, edema of the face, especially the eyelids, with pain, hardness, rigidity and contractures of the muscles and loss of tendon reflexes should lead one to suspect trichinosis. A leukocytosis of 25 to 30,000 white blood cells and an eosinophilia of 15 to 30 per cent will help to substantiate the diagnosis. A precipitin test for trichinosis will be positive in about 65 per cent of the cases. A positive diagnosis can only be made by a muscle biopsy demonstrating the T. spiralis.

CASE REPORT

This twenty-three year old white woman, gravida II, para I, entered the hospital in active labor with contractions every twelve minutes. On admission her temperature was 103.2°F., orally. She complained of a generalized aching feeling accompanied with fever and chills for the past week. The family physician treated her with aspirin and codeine sulfate for a catarrhal fever. At the time of admission we concurred with the family physician's diagnosis and treated her with penicillin and aspirin. The routine physical examination was normal. Six hours after admission to the hospital, she delivered spontaneously a viable female infant under drop ether anesthesia. Blood loss was moderate. The mother and baby left the delivery room in satisfactory condition, except for a slight sinus arrhythmia noted during delivery by the anesthetist.

During the first and second postpartum days the patient continued to run an elevated temperature which ranged from 100° to 103°F. This was accompanied with periodic bouts of sweating occurring at any time of the day or night. It was found that the cervical, axillary and

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FIG. 1. A section from the left deltoid muscle showing a coiled encysted larva of Trichinella spiralis. About it is a marked inflammatory infiltration of polymorphonuclear leukocytes and lymphoid cells.

inguinal lymph nodes were enlarged to about the size of a pea. A white blood count at this time showed a leukocytosis of 22,300 with 55 per cent eosinophilia. Upon further examination and questioning of the patient it was revealed she had noted a puffiness of her eyes approximately one week prior to admission to the hospital. She also admitted having eaten some homemade pork sausage approximately three weeks prior to admission but claimed that the sausage was thoroughly boiled.

On the third postpartum day she began to complain of generalized muscular pain with continued bouts of sweating and elevation of temperature. The impression at this time was trichinosis. A medical consultant concurred with this diagnosis.

The following day a skin test was done; this proved to be negative. On the sixth postpartum day the temperature continued at 102°F. and the white count was 16,000 with 62 per cent eosinophiles. The baby's blood count was normal.

On the tenth day the temperature was still elevated and the patient complained of pain in the muscles of the neck, arms and chest. The second skin test was also negative.

On the thirteenth day a microscopic diagnosis of trichinosis was made from a deltoid muscle biopsy. The pathologic report was as follows: Section of muscle from the left arm showed a coiled encysted larva of T. spiralis. About it was a marked inflammatory cell infiltration of polymorphonuclear leukocytes and lymphoid cells. Several other smaller focal collections of the same inflammatory cells were seen, but no larva was present in their immediate vicinity. Diagnosis was trichinosis of the muscle (arm). (Fig. 1.)

Other laboratory data was as follows: X-ray of the chest revealed a possible mitral lesion; electrocardiogram was normal; serology negative; blood type, O Rh positive; sedimentation rate 14 mm.; urinalysis cloudy amber, specific gravity 1,029; acid; sugar trace; albumin trace. Microscopically, there were occasional granular and occasional hyaline casts with a few white and red blood cells. The treatment throughout the patient's hospital stay was supportive. On discharge she was symptom-free and apparently well. Her white blood count at this time was 12,700 with 35 per cent eosinophiles. The baby left the same day in apparently good health, the white count being 7,300 with 2 per cent eosinophiles.

SUMMARY

In the foregoing comments we have emphasized the importance of establishing a definite diagnosis when pyrexia of late pregnancy occurs. A low grade temperature usually does not forewarn of a serious obstetric complication but one must not be lulled into a sense of false security. We have presented a patient, Mrs. D. O., gravida 11, para 1, who entered the hospital in active labor with a temperature of 103°F. A diagnosis of catarrhal fever was made and appropriate treatment followed. The labor was not further complicated. The postpartum course did not improve and subsequently trichinosis was suspected; this was substantiated by muscle biopsy. The possibility of transferring the T. spiralis from mother to child interested us.

Augustine, Staubli, Pavlica, Belding, Catron and Hooker have reported that in rats, rabbits, swine, cats and guinea pigs there is no apparent

transfer of T. spiralis from mother to fetus. After reviewing the literature similar results were found in the four cases reported in men. Mrs. D. O. delivered spontaneously a healthy normal female who progressed uneventfully while in the hospital. Two blood counts did not reveal an elevated eosinophilia. At five weeks of age the infant was still symptom-free, the eosinophile count was normal and skin test was negative. We therefore believe there was no transfer of T. spiralis in this case.

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