

## HUMAN COCCIDIOSIS CAUSED BY *ISOSPORA BELLI* A SECOND CASE OBSERVED IN BELGIUM

P. LIMBOS, A. FAIN AND P. DE MULDER

*Institute of Tropical Medicine and Leopold II Hospital, Antwerp*

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In 1962, the first case of human coccidiosis caused by *Isospora belli* was reported from Belgium<sup>1</sup>. It occurred in a patient of Armenian origin who had lived in Belgium from childhood and in whom *Isospora belli* oocysts were discovered in the stools while the patient was suffering from persistent diarrhoea which had started when he was travelling in Iran. Unfortunately, the patient was lost sight of later on.

The present paper records a second case of the same parasitism, also observed in Belgium, which had probably been contracted in Congo.

### CASE REPORT

Mr. D. G., aged 34, officer on board a Belgian vessel, had for several years regularly made the voyage from Antwerp to Matadi and back. On April 24, 1964, he reported at the Out-Patient clinic of the Leopold II Hospital. He had been ill for three weeks, the affection having started at the beginning of April, during the first days of a return voyage, with continuous fever to 39° and 40°C and the voiding of diarrhoeic stools several times a day. After five or six days of fever the temperature returned to normal, but the patient continued to have three or four diarrhoeic motions daily, attended with colics; the stools contained incompletely digested foodstuffs. In addition, there were epigastric pains at irregular intervals.

The patient was a rather corpulent man—77 kg with a height of 1.70 m—although he stated he had lost seven or eight kg since the onset of his illness. The epigastrium and the two iliac fossae were diffusely tender when palpated.

#### *Laboratory examinations*

Blood: thick slide negative, haemoglobin 16.97 g or 97.5 per cent, number of erythrocytes 5,600,000, volume index 0.87, volume of red cells 48.5, sedimentation rate 8 mm. Number of leucocytes 8,400.

Differential count: basophiles 0.5, eosinophiles 31.5, segmented neutrophiles 25.5, lymphocytes 41.5, monocytes 1.0.

The routine biochemical examination revealed no particular abnormalities, apart from a rather low blood urea, 15 mg%.

Stool cultures for *Salmonella* and *Shigella* were negative, as was the parasitological examination of the faeces, although the existence of many Charcot-Leyden crystals was noted. A diet and symptomatic treatment were prescribed, but the patient's condition remained the same. On May 11, a second parasitological faeces examination was carried out and again it showed many Charcot-Leyden crystals without parasites or parasitic ova. The number of white cells had decreased to 6,100 and the blood

eosinophilia had markedly diminished; the differential count now was as follows: basophiles 0.5, eosinophiles 7.5, not segmented neutrophiles 0.5, segmented neutrophiles 49, lymphocytes 42.5.

As the patient's complaints persisted without change and as his epigastrium caused him great discomfort, an X-ray examination of the digestive tract was made by Dr. COLAERT, whose conclusions were as follows:

"Normal gallbladder; no apparent organic lesions in the stomach and duodenum. A slight degree of gastritis. Normal intestinal transit."

A third faeces examination, on May 19th, finally yielded positive results as it revealed—apart from the large numbers of Charcot-Leyden crystals—a few scattered *Isospora belli* oocysts.

Treatment with chloroquine, 300 mg daily for seven days, was prescribed; it appeared to have a favourable effect on the symptoms which diminished rapidly and markedly although the diarrhoea persisted for a fairly long time. Bismuth subnitrate was prescribed symptomatically.

Examinations of the stools were carried out on June 3rd, 16th, and 26th; the oocysts, still few in number, had a degenerated aspect. At the last examination no Charcot-Leyden crystals were found.

When seen again on August 13th, after his return from holidays patient had no complaints; the diarrhoea had stopped completely. It was noted that the patient's weight had not changed since the date of his first visit to the Clinic.

Faeces examination on that day revealed nothing but yeasts. Repeated faeces examination on September 3rd gave completely negative results; the patient was considered to be cured. A third faeces examination performed a month afterwards was again negative.

#### COMMENTS

Although we cannot be certain, it may be assumed that the coccidiosis was contracted during the voyage from Antwerp to Matadi as the patient's diarrhoea started in the first days of the return voyage from the Congo to Belgium; an infection in the Congo was fairly probable as human coccidiosis was reported from that country in 1950<sup>2</sup>.

The present case showed the following interesting points:

(1) The small number of oocysts found in the stools in every positive examination; this might explain the fact that the first two examinations gave negative results because the oocysts were too few to be detected.

(2) The presence of large numbers of Charcot-Leyden crystals is almost a constant finding in coccidiosis<sup>3</sup>. Their presence, coupled with a negative parasitological faeces examination should suggest the possibility of coccidiosis, and it should be an indication that faeces examination should be repeated.

(3) The symptomatology of protracted diarrhoea, attended with abdominal cramps and epigastric pains, together with the presence of non-digested food in the stools, is observed in many cases of coccidiosis; in the absence of positive findings in faeces culture and parasitological faeces examination the possibility of an organic affection of the digestive tract was considered and therefore an X-ray examination of this tract was carried out.

In view of the difficulty of detecting the oocysts in the stools because of their rarity, the question arises whether a certain number of cases of coccidiosis might not remain undetected in Belgium, being mistaken for non-parasitic affections of the digestive tract. The rarity of oocysts in the stools has often been noted, for instance in the case in Tonkin recorded by GALLIARD<sup>4</sup> in 1936.

(4) It is difficult to give an opinion on the possible curative action of chloroquine which—in the absence of a specific treatment of coccidiosis—was prescribed with the idea that the drug might perhaps be active against a sporozoa other than *Plasmodium*. At any rate, after the administration of chloroquine the oocysts presented a degenerated aspect which persisted in all subsequent examinations, until the oocysts disappeared completely.

#### SUMMARY

Report of a case of human coccidiosis caused by *Isospora belli*, observed in Belgium but probably contracted in the former Belgian Congo.

Attention is drawn to certain details in the case which led the authors to suppose that the parasitism might occur more frequently than has so far been assumed.

#### RESUMEN

*Coccidiosis humana causada por Isospora belli*. Informe sobre el segundo caso, observado en Bélgica de coccidiosis humana, causado por *Isospora belli*, pero probablemente contraído en el Congo belga anterior.

Los autores llaman la atención sobre algunos detalles de este caso, los cuales les hacen suponer que esta infección ocurre más frecuentemente de lo que se haya asumido hasta ahora.

#### REFERENCES

- <sup>1</sup> P. LIMBOS, A. FAIN AND J. J. LAARMAN, *Ann. Soc. belge Méd. trop.*, 42 (1962) 883.
- <sup>2</sup> R. DEVIGNAT, A. LEGROS AND P. VERCAMMEN-GRANDJEAN, *Ann. Soc. belge Méd. trop.*, 30 (1950) 1467.
- <sup>3</sup> PH. MANSON-BAHR, *The dysenteric disorders*, London, Cassel, 1943, p. 266.
- <sup>4</sup> H. GALLIARD, *Bull. Soc. Path. exot.*, 29 (1936) 118.