Correspondence

Report on prisoners of conscience

To the editor: Thousands of men and women are being detained in Soviet prisons, corrective labour colonies and psychiatric hospitals because of their political or religious beliefs. Long hours of isolation, hunger, medical neglect and forced psychiatric treatment with powerful drugs that confuse and maim are accepted procedures to which these people are subjected. In contemporary Soviet penal law the "infliction of suffering" in the maintenance of prisoners is regarded as permissible and necessary.

In more than 14 years of work on violations of human rights throughout the world, Amnesty International has accumulated a great deal of information on the treatment and conditions of prisoners of conscience in the USSR. This information is now available with the release (in five languages) of "Prisoners of Conscience in the USSR: Their Treatment and Conditions".

This report, one of the most detailed ever produced on a single country by Amnesty International, presents an analytical account of conditions in Soviet prisons and corrective labour colonies and of the legal and medical treatment of prisoners of conscience who are detained in psychiatric institutions.

The report will be of interest to all who value freedom. The documented evidence of maltreatment by Soviet physicians and psychiatrists will be of particular interest to physicians. The report is available from Amnesty International for $2.

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Contributions to the Correspondence section are welcomed and if considered suitable will be published as space permits. They should be typewritten *double spaced* and should not exceed 1½ pages in length.

Dientamoeba fragilis in idiopathic gastrointestinal disorders

To the editor: A poorly understood protozoan parasite, *Dientamoeba fragilis,* in certain circumstances may give rise to disorders of the gastrointestinal tract, as the following case report illustrates.

Soon after returning from a visit to the United Kingdom in September 1975 a 9-year-old girl (daughter of S.S.D.) contracted respiratory influenza. After about 3 weeks and apparent recovery from the flu she began to lose weight and to have periodic bouts of severe abdominal pain, nausea and weakness. Examination by both the family physician and a prominent pediatrician failed to reveal the source of the problem and she was admitted to hospital. Further tests, including routine stool examinations, revealed a constricted ureter, but cystography showed that the ureter was not occluded. After 2 weeks the child was discharged from hospital and her parents were informed by the pediatrician that her symptoms were probably due to psychological problems.

Shortly thereafter, following a discussion of the incidence and nature of gastrointestinal symptoms associated with *D. fragilis* and the difficulty in detecting the parasite in one or more stool examinations, we decided to examine stool samples from the child on several successive days. *D. fragilis* was detected in two of seven samples. On the recommendation of Dr. P. Stewart of the Toronto General Hospital's clinic for tropical diseases, a 10-day course of treatment with diphetarsone (Bémarsal) was begun. Two weeks after completion of treatment the patient had regained 3 kg and her symptoms had disappeared. Her younger brother, whose stool samples also contained parasites but who was asymptomatic, was also treated. Parasites were not detected in a series of five stool samples from each child 1 month after treatment.

Examination of several stool samples for *D. fragilis* is necessary because the number of parasites may vary widely from day to day. This was clearly illustrated in a study by one of the authors (Y.J.Y.) of the stools of a heavily infected individual: one day 1.3×10^7 organisms were detected per millilitre of feces; the day before, none had been detected.

This case report is not unique; there is much information in the literature implicating *D. fragilis* as a potential pathogen. The frequency of gastrointestinal and other symptoms in patients of 19 published reports in whom only *D. fragilis* was identified is summarized in Table I.

Table I—Frequency of gastrointestinal and other symptoms in 186 patients in whom only *Dientamoeba fragilis* was identified

Symptoms	% of patients
Diarrhea	46.2
Abdominal pain	42.5
Abnormal stool (i.e., containing blood or mucus)	22.6
Nausea and/or vomiting	20.4
Flatulence	19.9
Fatigue or weakness	13.4
Alternating diarrhea and constipation	13.4
Weight loss	10.2
Others	30.5

An intriguing problem is the parasite's mode of transmission, for it has no cystic stage. More than 20 years ago the human pinworm, *Enterobius vermicularis,* was suggested as a possible vector of *D. fragilis.*[1] Recently Ockert[2] found that *E. vermicularis* and *D. fragilis* were the most common parasites in nursery-school children in Germany, and that *D. fragilis* was highly prevalent in children with pinworms. Subsequently Ockert[3] collected eggs of *E. vermicularis,* washed them in water, exposed them to pepsin and hydrochloric acid, and then ingested them; 25 days later he was infected with both *E. vermicularis* and *D. fragilis* — convincing proof of their direct association.

In several studies *E. vermicularis* was found infrequently in patients with *D. fragilis* infections. There are three pos-

sible explanations: (a) diagnosis of pinworm was based solely on examination of stool specimens and not on the more effective tape or swab method;[4] (b) the pinworm lives for 2 or 3 months, whereas *D. fragilis* lives for several years;[4] and (c) treatment directed against the pinworm will not eliminate the protozoan parasite.

The child described in the case report was infected with pinworm in 1968 and treated with pyrvinium pamoate. Both she and her younger brother were infected with pinworm in 1971 and treated similarly. Possibly both children were then also infected with *D. fragilis*.

Furthermore, *D. fragilis* is not an ameba. Recent electron microscopic[5] and immunologic[6] evidence indicates that the parasite is closely related to the trichomonad flagellate *Histomonas meleagridis*, a pathogen found in the cecum of turkeys and transmitted within the egg of the cecal nematode *Heterakis gallinarum*.[7]

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Globin zinc insulin

To the editor: The decision by Burroughs Wellcome Ltd. to stop producing globin zinc insulin in the United States created problems for Canadian diabetics receiving this insulin, because that firm was the sole importer and distributor of globin zinc insulin in Canada. Their action has raised several questions, but the purpose of this letter is to try to answer the question "Does globin insulin have unique characteristics that make it of special value in the treatment of diabetes?"

Globin zinc insulin was discovered in 1939,[1] when the only commercially available insulins were crystalline zinc or unmodified insulin and protamine zinc insulin. At that time, many centres were trying to discover an insulin that would give satisfactory coverage with one daily injection before breakfast. One of the first extensive reports of the clinical usefulness of globin insulin was published in this journal in 1974 by Rabinowitch, Fowler and colleagues,[2] who concluded that globin insulin had fairly intensive daytime action but did not provide 24-hour coverage. They suggested that it might better be used to treat severe disease that was difficult to control; the inconvenience of two injections per day would be outweighed by the improved control.

Over the years Drs. Rabinowitch and Fowler at The Montreal General Hospital and their disciples have treated many patients with a combination of globin insulin before breakfast and protamine insulin before supper. The rationale was that globin insulin should start to act fairly intensively in 2 hours and counteract the hyperglycemia of lunch and supper, its action ending by about 16 hours, when the protamine insulin taken before supper should start to act; the effect of the latter drug should continue overnight and through breakfast. The most intensive overlapping action should be in late morning or at lunchtime. Adjustment of the dose was simple: daytime hypoglycemic reactions indicated a need to reduce the globin insulin dose; night-time reactions indicated a need to reduce the protamine insulin dose; and positive tests for glucosuria on arising or before supper indicated a need to increase the dose of the preceding insulin.

Globin insulin never became widely used as the sole insulin given once or twice a day, because its appearance on the market was soon followed by that of isophane (NPH) insulin, which had a somewhat longer duration of action, and the latter, in turn, lost ground to Lente insulin. On the other hand, the principle that many patients whose disease is difficult to control should receive combinations of fast-acting and slow-acting insulin twice a day has gained wide acceptance. In such cases, a regimen of globin insulin before breakfast and protamine zinc insulin before supper has much to recommend it. Globin zinc insulin is the only insulin with retarded action that is in solution rather than suspension. It is remarkably stable and its action is reproducible. Protamine zinc insulin is,