Chlamydia trachomatis is not a cause of acute gastroenteritis in young children

Chlamydia trachomatis is so far considered to cause superficial infections limited to the epithelium of conjunctiva, urethra, cervix, and rectum. Recently, *C. trachomatis* has been recovered from the throats and nasal discharges of infants with inclusion blenorhoea,¹ and from the throat of a patient with pharyngitis without any history of conjunctivitis.² In addition, *C. trachomatis* can induce a typical pneumonia syndrome in infants.³

It is worthwhile pointing out that the throat and the lungs contain cells histologically similar to the epithelial cells of the ocular and genital tract. Such observation made Schachter⁴ speculate that the presence of columnar epithelium is critical for the growth of *C. trachomatis* and hence for the occurrence of *C. trachomatis*-related disease. Since such cells are present in the intestinal tract, one may think it possible that chlamydiae cause infection and disease if transmitted to the intestine. In addition, some recent serological studies,⁵ pointed out the presence of a relatively high percentage (10–15%) of children less than 10 years of age, with antichlamydial antibodies, in absence of a previous infection possibly by *C. trachomatis*.

These reasons prompted us to investigate the role, if any, of *C. trachomatis* during a longitudinal study, still in progress, on the aetiology of acute diarrhoea of young children. Stools were collected from 60 young children (age: 6–24 months) on admission to the hospital for acute diarrhoea, in December 1981. Serial tenfold dilutions in Eagle's MEM plus antibiotics of a 20% (wt/vol) suspension in phosphate-buffered saline pH 7.2 of each faecal sample were used for the detection of *C. trachomatis*. McCoy cells pretreated with 5-iodo-2'-deoxyuridine were used for *C. trachomatis* isolation attempts. The detection of *C. trachomatis* inclusions was performed by iodine and Giemsa stains of infected cells, 72 hours after infection. In addition, infected McCoy cells were stained by indirect immunofluorescence technique, using anti *C. trachomatis* (LGV 2 strain) hyperimmune rabbit serum.

Chlamydia trachomatis inclusions were never detected in McCoy cells, either by iodine and Giemsa stains, or by indirect immunofluorescence technique.

Although the aetiological role of *C. trachomatis* in sexually transmitted diseases is clear, a possible role of *C. trachomatis* in diseases of anatomic sites other than the

genital tract, rectum, conjunctiva, and respiratory tract needs further investigation. The present investigation seems to rule out the aetiological importance of *C. trachomatis* in acute gastroenteritis, at least in young children.

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A new medium for isolating *Campylobacter jejuni/coli*

We would like to support Bolton and Robertson's claim that their Preston medium¹ improves *Campylobacter* isolation rates.

Last year Preston broth, incubated at 43°C in a microaerophilic atmosphere containing 15% carbon dioxide, was added to the routine *Campylobacter* isolation technique used in this laboratory as an enrichment stage with subculture after 24 h to Skirrow's medium,² incubated under the same conditions for 48 h (previously Skirrow's medium alone had been used for selective isolation).

Subsequently we examined 939 unselected human faecal samples or rectal swabs. The results are recorded in Table 1. The isolation rate for direct culture alone was 4.2%. This was raised to 7.2% (a 74.4% increase) by the use of enrichment.

Table 1 Isolation of *Campylobacters* from 939 human specimens using Preston enrichment broth and Skirrow's selective medium

Direct	Enrichment	No. of specimens
+	+	38
+	–	1
–	+	29
–	–	869

In addition to the human samples, eight faecal specimens from domestic pets (5 dogs and 3 cats) were cultured for *Campylobacters*. Of these a sample from one cat produced a positive result on enrichment only.

River water can be examined using the same technique. "Nuflow" cellulose acetate filters (Oxoid N50/45G 0.45 µm pore size), through which 50 ml aliquots of water have been passed, are cut in half to inoculate the media. Results with 64 samples examined so far by this method are shown in Table 2.

Table 2 Isolation of *Campylobacters* from 64 river water samples using Preston enrichment broth and Skirrow's selective medium

Direct	Enrichment	No. of specimens
+	+	0
+	–	0
–	+	12
–	–	52

None of the samples was positive on direct culture, whereas 18.7% were positive after enrichment. In a further three instances (4.7%) additional positive results were obtained with a second subculture after 48 h enrichment.

Our experiences confirm Bolton and Robertson's findings. Clearly an enrichment technique is required for *Campylobacter* isolation especially when Skirrow's medium is used as the selective medium. There are still areas to be clarified such as the optimum timing of subculture after enrichment and the number of subcultures required. The increased sensitivity provided by the enrichment has produced several advantages, namely: (i) the ability to make a precise bacteriological diagnosis of the cause of diarrhoea when specimens are received late in the disease or are delayed in transit; (ii) the ability to recognise prolonged or asymptomatic excretion of the organism; (iii) the ability to isolate *Campylobacters* from non-human and environmental sources. Together with the development of improved typing facilities³ this should lead to a better understanding of