

## ENTERIC FEVER-UNUSUAL PRESENTATION.

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Girl M, 9 years old was first seen on a domiciliary visit on 1/12/2025 with a one day history of fever. On examination she was found to have a pulse rate of 120/min with a temperature of 101° F. Her chest was clear on auscultation but she had some abdominal tenderness plus a history of rigor. Tonsils were enlarged. She was thought to be a case of urinary infection, and or, tonsillitis and put on penicillin and sulphas combination tablet. That same evening her temperature rose to 104° F and later 105° F. This was accompanied with shivering. She had complained of severe abdominal pain and burning sensation in the stomach. The following day she was therefore put on di-methyl tetracycline as it was felt that her temperature and the shivering attack was because of urinary infection due to organisms resistant to sulphonamides.

On the third day of her illness her temperature continued at the 104-105° F level and as she had had a number of loose motions an anti-diarrhoeal agent was added. A w.b.c. count was of the order of 12,800/cu mm whilst both urine and stool showed no abnormalities on examination. Urine was sterile on culture. By the fifth day of her illness she showed no remarkable improvement, she still had colicky pain and burning sensation in the stomach, accompanied by loose motions. She did not have any other symptoms.

The possibility of this being enteric fever was then considered and blood examination was repeated. This showed a w.b.c. count of 8,700/cu mm with 53% Polymorphs and 47% Lymphocytes. Repeat urine examination only showed 0-3 pus cells but it did show significant Bacteraemia-E. coli being present. She was therefore started on ampicillin 250 mgm four times a day. Her subsequent rigor on the sixth day made us feel more confident that she had an E. coli urinary infection, resistant to most antibiotics.

Her temperature did not settle and the burning sensation in the stomach was accompanied by pain over the lower thoracic spines. Coupled with the history that her Mantoux Test done some nine months previously had been strongly positive, one had to exclude A.F.B. infection. X-ray of the chest and dorso-lumbar region were however both-ve. Repeat urine examination once again showed very few pus cells but on culture grew E. coli. The w.b.c. count was 7,300/cu mm with 57% Polymorphs and 43% Lymphocytes. Blood was

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also sent for culture and Widal examination. Blood culture was negative and Widal test result being doubtful had to be repeated.

On the twelfth day of her illness she had another rigor when her temperature rose to 104.4°F. Both blood and Widal test were repeated. The presence of *E. coli* on two occasions reinforced our conviction that it was resistant to most antibiotics. Urine culture and sensitivity had shown the organism to be sensitive to nitrofurantoin, so this drug was added to her treatment—in addition to the ampicillin which she had been having since the fifth day of her illness. The following day however, the ampicillin was stopped as it had not had any marked effect on her treatment. Blood was once again taken for Widal examination and culture. It was therefore only on the fourteenth day of her illness, after demonstrating the presence of 1/160 H antibody titre for *S. typhi* with the Widal reaction that chloramphenicol was started on a dosage of 250 mgm every four hours. On the fifteenth day of her illness we were informed that the stool sent earlier for examination had grown *Salmonella typhi* on culture. The nitrofurantoin was stopped. There was a remarkable improvement in the patient's condition—within 24 hours her temperature was coming down and by 48 hours it was normal. The chloramphenicol dosage was slowly reduced and ultimately stopped.

Then the patient continued to improve but was kept at bed rest. On 6/1/2026 i.e. on the thirty-sixth day of her illness however her temperature rose to 100° F. No specific signs were found. She was started on sulphonamides and an alkali mixture. Blood was taken once again for culture and this time at last this grew *Salmonella typhi*. Urine was sterile on culture. This confirmed what had been our suspicion only viz. that it was a relapse of typhoid fever that we were dealing with. The patient was restarted on chloramphenicol and has now made a complete recovery.

### DISCUSSION

The usual onset of typhoid fever is gradual and one calls to mind the step ladder rise of temperature. Her temperature tended however to show rather erratic fluctuation, though never reaching the normal or subnormal levels. The 2nd, 3rd, 4th and 5th cardinal signs as mentioned by Manson-Bahr viz. low pulse, temperature ratio, characteristic toxæmia, splenic enlargement, and rose spots were negative. Manson-Bahr mention that the 1st sign viz. the characteristic enteric temperature chart must be accompanied by at least two cardinal signs for the case to be labelled as enteric. Our case therefore had these shortcomings. Moreover though initial rigor is sometimes seen in enteric fever, repeated rigors as in this case are very rare.

Another point which delayed us in making a diagnosis of enteric fever was that the Widal Test did not become significant till the fourteenth day of her illness. It is accepted that the Widal Test becomes manifest by the 7–10th day of illness but Cruickshank mention that it occasionally occurs earlier (5th day) or may be delayed. The classical type of enteric fever is hardly seen nowadays. Most P.U.O. cases get a dose or two of chloramphenicol be

fore any confirmatory tests are done on the basis of 'clinical experience' that this is enteric. Consequently this has an effect on the presentation of enteric fever, if it was in fact a true case. The other possibility of course is that the typhoid bacillus has undergone some change since the advent of chloramphenicol and this case may be an example of this.

The third point of interest about this case is the apparent lack of response to ampicillin. Whilst our dosage schedule of 250mgm 6 hourly is half that recommended by Sanders for a 10 year old child, it is nevertheless a fairly high dose. Furthermore our case was not a severe case and inspite of it, the fact that the apparent lack of any response to ampicillin and prompt response to chloramphenicol occured makes us offer this as evidence that chloramphenicol is superior to ampicillin.

#### References

1. Cruickshank R. (Ed) 1965, Medical Microbiology 11th Ed.
2. Manson-Bahr Sir P. 1960. Tropical Diseases 15th. Ed.
3. Sanders W.L. (1965). Treatment of Typhoid Fever: a Comparative Trail of Ampicillin and Chloramphenicol. Brit. med. J. 2, 1226.

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