CYANOBACTERIA LIKE BODIES (CLBs) AND DIARRHOEA

(Hale D, Aldeen W, Carroll K. Diarrhoea associated with Cyanobacteria like bodies in an immunocompetent host. *JAMA* 1994; 271 : 144-5).

Summary

Objective : To describe a patient who developed diarrhoea secondary to Cyanobacteria like bodies (CLB) after exposure to contaminated water in his home.

Study Design : A case report.

Setting : General community.

Patient : Healthy elderly man

Method : Wet mounts of stool submitted in 10% buffered formalin and polyvinyl alcohol were examined. Permanent slides were stained with Kinyoun's acid fast stain. The slides were examined with light microscopy and under 480 nm fluorescent light.

Results : Wet counts showed 8-10 µm refractile, algae like organisms with 1-3 internal structures. They were acid fast and displayed orange auto fluorescence under 480 nm. Sewage material, to which the patient was exposed, showed organisms identical in morphology and staining to that found in patient's stool samples. These disappeared after clinical recovery.

Conclusions : In this study, cyanobacteria like bodies caused protracted diarrhoea in an immunocompetent person, the source of the organism being contaminated water. Awareness of their causative role in diarrhoea is warranted, specially because CLBs can be confused with *Cryptosporidium* organisms.

Comments

Several outbreaks with diarrhoeal illness associated with CLBs have been described since 1989, involving patients with AIDS and travellers to tropical countries [1]. CLBs have been added to the list of organisms causing diarrhoea in AIDS patients.

The organism is suggested to belong to the genus *Cyclospora* of class Sporozoa [2]. Unless parasitologists are aware of CLBs they can be misinterpreted as *Cryptosporidium*, thus wrongly dictating a poor prognosis. Both organisms can be present in polluted waters, can infect healthy as well as immunosuppressed and both are acid fast. The distinguishing features are the larger size of CLBs (*Cryptosporidium* in stool range from 3.5-5.5µm), their intense blue autofluorescence under ultraviolet light and presence of inner refractile structures (morula) within them. Commercial kits are available today to detect *cryptosporidium*.

CLBs cause illness with symptoms including fever, malaise followed by explosive watery diarrhoea in 95% of patients. Other symptoms include anorexia, nausea, vomiting and abdominal cramps. A typical clinical course consists of remissions and relapses of diarrhoea that may last four weeks or longer. The diarrhoea resolves even in patients with AIDS. There is a recent report of CLBs causing diarrhoea in an AIDS patient from Sassoon Hospital, Pune [3].

REFERENCES

1. Outbreaks of diarrhoeal illness associated with Cyanobacteria (blue green algae), Chicago and Nepal, 1989 and 1990. *Morb Mortal Wkly Rep* 1991; 40 : 325-7.
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3. Lashkare A, Kagal A, Nene SS, Khare PM. *Cyclospora* species : A new protozoan pathogen of humans - A case report. In proceedings of the XVII National Congress of IAMM, Calcutta, Dec 1993; 118.

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