Cervical lymphadenitis in childhood due to mycobacteria of the Fortuitum group

MARILYN J. RIVRON, E. A. HUGHES, J. R. SIBERT, AND P. A. JENKINS

Welsh National School of Medicine, the University Hospital of Wales, Cardiff, and the Mycobacterium Reference Unit (PHLS), Cardiff

SUMMARY Two children with cervical lymphadenitis due to *Mycobacterium fortuitum* infection are described; both presented with erythema nodosum.

Opportunist mycobacteria which grow rapidly at 37 and 25°C and lack pigment, belong to the Fortuitum group (Marks, 1976). Infection is rare in man and it usually follows injections (Beck, 1965) or trauma (Hand and Sanford, 1970). We report 2 children presenting with cervical lymphadenitis and erythema nodosum due to Fortuitum group organisms. This has not been previously reported.

Case reports

Case 1. A 5-year-old girl from mid-Glamorgan presented in November 1977 with bilateral cervical swellings fluctuant on the left, fever, and erythema nodosum. There was no family history of tuberculosis. The Mantoux test with 1 TU PPD was strongly positive but x-rays of the chest were normal. The left-sided cervical abscess was incised and drained (Mr J. Lari). The pus showed numerous acid- and alcohol-fast bacilli on microscopical examination and within 7 days an organism belonging to the Fortuitum group was grown. It was resistant to all antibiotics except ethionamide, gentamicin, and amikacin. Initially the patient's condition improved after operation on standard antituberculous treatment (rifampicin, isoniazid, and ethambutol). However, the fever returned and she developed an abscess on the right. This was incised and drained (Mr J. Lari), and the treatment changed to ethionamide 125 mg twice daily, and gentamicin 40 mg three times daily, the latter for 10 days. She became afebrile on this regimen and the swelling subsided. She remains on ethionamide. Curettings of the right-sided abscess showed poorly-formed and ill-defined granulomata.

Case 2. A 5-year-old girl from Cardiff presented in January 1978 with a right-sided submandibular

swelling and erythema nodosum. She had had a dental extraction 6 months earlier. However, x-rays of the mandible and chest were normal. The Mantoux test with 1 TU PPD was strongly positive. The swelling which was an enlarged lymph gland was totally removed (Mr J. Lari). Fortuitum group organisms resistant to all antibiotics except ethionamide, gentamicin, and amikacin were grown. The wound healed and the swelling has not recurred despite the patient being managed without antibiotics. ESR has fallen from 70 mm in the 1st hour and her erythema nodosum has resolved.

Lipid analysis of the two strains showed that one (Case 2) was identical with *M. fortuitum* NCTC 10394 while the other (Case 1) had a slightly different lipid pattern (Marks and Szulga, 1965).

Discussion

Children are constantly exposed to opportunist mycobacteria present in the environment. The organisms most likely to cause cervical adenitis are either *Mycobacterium avium* or *Mycobacterium intracellulare* species, but the presentation of these two children shows that *M. fortuitum* and other species must also be considered. Fortuitum group mycobacteria have been cultured from the sputum of approximately 25% of Welsh miners without immediate illness appearing to result (Jenkins and Marks, 1971), and the organisms must therefore be common. In Case 1 there was no apparent portal of entry; the dental extraction was probably significant with Case 2.

The high degree of resistance of the organism to antibiotics presents difficulties in the management as ethionamide is the only oral medication to which these mycobacteria are sensitive. Case 2 was managed without antibiotics as the gland was totally removed, but the widespread tissue involvement in Case 1 warranted chemotherapy.

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Correspondence to Dr J. R. Sibert, Department of Child Health, Llandough Hospital, Penarth, Glamorgan CF6 1XX.

Progressive hypogammaglobulinaemia in a child born to a mother with Hodgkin's disease

D. I. K. EVANS AND J. L. BURN

Departments of Child Health and Haematology, Royal Manchester Children's Hospital, and Bolton General Hospital, Lancashire

SUMMARY A young woman developed Hodgkin's disease (nodular sclerosis) in pregnancy and gave birth to a boy who developed common variable immunodeficiency. Initially there was normal IgG with low IgA and IgM, and antibody deficiency. IgG levels fell progressively over 4 years. Cellular immunity was normal. We suggest that this is a further family with immune deficiency presenting with common variable immunodeficiency and lymphoid malignancy.

The association of immunodeficiency with lymphoid malignancy has been reported. We report an unusual combination in a family: a young woman developed Hodgkin's disease in the 3rd trimester of pregnancy and gave birth to a boy who was found later to have common variable immunodeficiency. The father and elder child are normal.

Case histories

The mother. The mother's past medical history was uneventful until her appendix was removed for acute appendicitis at 28 years; during convalescence she developed infective hepatitis.

She noted enlarged cervical lymph nodes during her normal 2nd pregnancy at age 29. A month after confinement she developed a large liver and spleen. A lymph node biopsy showed Hodgkin's disease (nodular sclerosis). She also had lymphopenia ($0.38 \times 10^9/l$). She was treated with radiotherapy and chemotherapy but died 4 years later after a generalised herpes zoster infection.

Lymphocyte counts during remission were often $<1.5 \times 10^9/l$ and usually $<1.0 \times 10^9/l$. No other tests of immunological function were done.

The child. Her son was born normally at term weighing 3.23 kg. He was bottle fed. Growth and development in infancy were normal. He received 3 doses of triple antigen (diphtheria/pertussis/tetanus) and oral polio vaccine during the 1st year of life, and a booster at 18 months. Since then he has had chicken pox and mumps. He has had recurrent nasal discharge, fever, nocturnal cough, occasional wheezing and exertional dyspnoea, intermittent diarrhoea, and two attacks of pneumonia, associated with neutrophil leucocytosis.

At age $5\frac{1}{2}$, he developed herpes zoster. Apart from mild superficial scarring, there were no sequelae. Serum immunoglobulin concentrations were IgG 6.0-6.2 g/l, IgA 0.12 and <0.10 g/l. IgM was not detectable. Finger clubbing, a prominent sternum, and persistent coarse adventitial sounds over the right middle lobe were noted. Tonsils and adenoids were very small. He had no lymphadenopathy or enlargement of liver or spleen. X-ray showed chronic inflammatory changes in the right upper and lower lobes suggesting bronchiectasis.

At age 6 years, haemoglobin was 11.2 to 12.4 g/dl, with WBC 10.7 to $12.4 \times 10^9/l$, neutrophils 62%, lymphocytes 33%, monocytes 3%, eosinophils 2%. The absolute lymphocyte count was approximately $4.0 \times 10^9/l$, small lymphocytes 42%, medium lymphocytes 44%, large lymphocytes 14%. Tests of immunity are shown in the Table.

The neutrophil NBT test showed 3% positive cells