Medical Memoranda

A Case of Reiter's Syndrome in Childhood

Though often reported in adults, the triad of arthritis, conjunctivitis, and urethritis has rarely been noted in children. Post-dysenteric joint manifestations have long been known, but it is only recently that cases have been described having the urethritis and conjunctivitis in association with arthritis. The first published account of this syndrome in childhood did not appear until 1946, when Koster and Jansen reported a Dutch family in which three infants developed the triad after an episode of diarrhoea. Zewi (1947) recorded a series of 10 children with the syndrome, and since then occasional cases have been reported from the United States, Finland, and Britain.

CASE REPORT

A boy aged 9 years attended the casualty department in February, 1960, complaining of pain on micturition. One week previously he had had abdominal pain associated with passage of slimy, light-coloured, loose stools, which contained no obvious blood. After passing eight motions in 48 hours both pain and diarrhoea abated without treatment. His past history was of balanitis in 1958 and acute nephritis in June, 1959; follow-up of the latter had not shown any residual renal damage. On examination his temperature was 99° F. (37.2° C.); there were no abnormal signs in the abdomen, and his penis appeared normal. His urine contained a light cloud of protein, innumerable pus cells, scanty epithelial cells, and eight red cells per high-power field. Treatment with sulphamethizole ("urolocosil") and a potassium-citrate mixture was begun and prophylactic penicillin, prescribed after his acute nephritis, was continued. He was allowed home.

Next day his temperature was 100° F. (37.8° C.). Dysuria had persisted and his right knee had become painful, possibly from an injury sustained the previous day. No swelling was noted, but the joint was most tender just below its medial margin. The urethral meatus was reddened though no discharge was seen. Treatment was not materially altered and he was sent home.

By the following day the dysuria had diminished, but the right knee was more painful and both eyes had started to discharge. He was admitted with a temperature of 101° F. (38.3° C.), oedema of both eyelids, marked conjunctivitis, and circumcorneal injection; the right knee was swollen (see photograph), with tenderness maximal on the medial surface and absolute limitation of movement. There was no urethral discharge, and the genitalia were normal, as were

Photograph showing swelling of right knee.

the cardiovascular, respiratory, and alimentary systems. He was given intramuscular penicillin 500,000 units six-hourly, and sulphacetamide eye-drops, the sulphamethizole and potassium citrate mixture being continued.

Investigations.—Hb, 84%; sedimentation rate, 56 mm./hour; white blood count, 18,400/c.mm. (2% stab cells, 78% polymorphs, 14% lymphocytes, 6% monocytes). Conjunctival swab: no pathogens grown. Wassermann reaction, Reiter's protein antigen, P.P.R., and gonococcal complement-fixation test were all negative. *Brucella abortus*, *Salmonella typhi* O and H, *Salm. paratyphi* A O and H, B O and H, C O. Non-specific salmonella—no agglutination. Polyvalent *Shigella flexneri* serum—no agglutination. Culture of stool on monkey kidney failed to grow any cytopathogenic agent. X-ray examination of the knee showed a marked effusion into the joint without any bony changes. A chest x-ray film showed no significant pulmonary lesion. A Mantoux test was not performed because he had had B.C.G. just five weeks previously.

Within two days he recovered 5 degrees of knee movement, the temperature started to fall, and conjunctival injection decreased. A few erythematous plaques appeared on his palate the next day, and next evening a brisk epistaxis occurred controlled by adrenaline plugs. All chemotherapy was then discontinued. Now the sedimentation rate was 62 mm./hour; white-cell count, 16,600/c.mm. (63% polymorphs, 32% lymphocytes, 5% monocytes); platelets, 180,000. Knee flexion increased to 30 degrees by the tenth day, returning to normal over the subsequent three days. At the time of writing he was afebrile but complained of left palmar pain and inability to clench his fist. These signs resolved. The conjunctival injection recurred in the left eye on the twenty-first day, and in the right eye on the twenty-third day. Hydrocortisone eye-drops produced resolution within 48 hours. The sedimentation rate was then 47 mm./hour, falling in four weeks to 32 mm. and finally to 7 mm. After six weeks in hospital the patient's right knee movements were full and pain-free, and his conjunctivae were normal.

COMMENT

This condition, with which the name of Reiter has come to be associated, was originally thought to be venereal in origin, but some cases have followed a dysenteric infection. Paronen (1948), in his Finnish series, found evidence of previous *Shigella flexneri* V infection in 94% of his patients, and the case reported by Corner (1950) similarly showed a high titre of antibodies to *Shigella flexneri* V. In the present case, however, no antibodies to the *Shigella* group could be detected, and virus cultures showed no growth. The aetiology of the disorder remains obscure, but this case suggests that not all are associated with flexner dysentery. It has been suggested that Reiter's syndrome results from infection by a specific organism, as yet unidentified, gaining entry to the body as the result of another primary infection, usually dysenteric. It is also possible that the syndrome represents the reaction of susceptible individuals to certain infections, of which flexner dysentery is the commonest.

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REFERENCES

- Corner, B. D. (1950). *Arch. Dis. Childh.*, **25**, 398.
Koster, M. S., and Jansen, M. T. (1946). *Ned. T. Geneesk.*, **90**, 483.
Paronen, I. (1948). *Acta med. scand.*, **131**, Suppl. 212.
Zewi, M. (1947). *Acta Ophthal. (Kbh.)*, **25**, 47.

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