Characteristics of Patients Referred to a Pediatric Infectious Diseases Clinic with Unexplained Fever

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BACKGROUND

Case series describing children meeting a priori definitions of "fever of unknown origin" (FUO) were published in the 1970s-90s. These studies suggested that the proportion of children with no specific diagnosis increased over time and that the proportion of children referred with recurrent fevers increased. Few studies since then have revisited this construct in the U.S.; none has provided a broader view of the final diagnostic categories of children referred with unexplained fever. Recent large studies of FUO in children in the U.S. are lacking.

METHODS

A retrospective chart review of all outpatients referred to a pediatric infectious diseases clinic of an academic medical center from 2008-2012 was performed. The proportion of children with FUO who ultimately had infectious, inflammatory, and neoplastic etiologies was measured. A priori definitions of FUO were used to classify children. Descriptive analyses performed.

RESULTS

Of 606 charts, 69 were unique patients referred with "fever", "febrile", or "FUO" as a billing diagnosis. After exclusions, 221 remained in the study group. Thirty-nine (35%) were referred with FUO; 38 were not having true fever. Of the other 221, 30 had documented sepsis at clinical exam. The remaining 191 patients had FUO and were evaluated. The proportion of patients with recurrent fever was 30 days (21-46); 71% had daily fever. Thirty-three (39%) of 86 patients who had a FUO diagnosis were discharged from the hospital. 16 had infectious, 1 inflammatory, and 1 neoplastic etiologies. Of 152 patients referred with recurrent fever, 12 (9%) had an infectious etiology. 84 (56%) of these had no specific diagnosis or thought to have febrile, self-limited viral illnesses. Of all patients with periodic fever pattern, 90 were thought to have periodic fever, 18 infectious etiologies, 10 periodic, and 1 other (PAFPA syndrome). 1 had familial Mediterranean fever, and 29 had no FUO diagnosis.

CONCLUSIONS

The majority of children referred to this subspecialty clinic with unexplained fever ultimately had either infectious or inflammatory diseases or no specific diagnostic code. Serious diagnoses were unusual, occurring in 10% of patients with prolonged fever and 3% of patients with recurrent fever. Few children required hospitalization or treatment. If children are referred by primary care providers or other subspecialists, a broader view of final diagnostic categories is recommended.