

Epidemiological Patterns of Pediatric Fever of Unknown Origin

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Abstract : Background: In today's world, with modern science and contemporary technology, a lot of diseases may be quickly identified and ruled out, but children's fever of unknown origin (FUO) still presents diagnostic difficulties in clinical settings. Any fever that reaches 38 °C and lasts for more than seven days without a known cause is now classified as a fever of unknown origin (FUO). Despite tremendous progress in the medical sector, fever of unknown origin, or FOU, persists as a major health issue and a major contributor to morbidity and mortality, particularly in children, and its spectrum is sometimes unpredictable. The etiology is influenced by geographic location, age, socioeconomic level, frequency of antibiotic resistance, and genetic vulnerability. Since there are currently no known diagnostic algorithms, doctors are forced to evaluate each patient one at a time with extreme caution. A persistent fever poses difficulties for both the patient and the doctor. This prospective, observational study was carried out in a Bangladeshi tertiary care hospital from June 2018 to May 2019 with the goal of identifying the epidemiological patterns of fever of unknown origin in pediatric patients. Methods: It was a hospital-based prospective observational study carried out on 106 children (between 2 months and 12 years) with prolonged fever of >38.0 °C lasting for more than 7 days without a clear source. Children with additional chronic diseases or known immunodeficiency problems were not allowed. Clinical practices that helped determine the definitive etiology were assessed. Initial testing included a complete blood count, a routine urine examination, PBF, a chest X-ray, CRP measurement, blood cultures, serology and additional pertinent investigations. The analysis focused mostly on the etiological results. The standard program SPSS 21 was used to analyze all of the study data. Findings: A total of 106 patients identified as having FUO were assessed, with over half (57.5%) being female and the majority (40.6%) falling within the 1 to 3-year age range. The study categorized the etiological outcomes into five groups: infections, malignancies, connective tissue conditions, miscellaneous, and undiagnosed. In the group that was being studied, infections were found to be the main cause in 44.3% of cases. Undiagnosed cases came in at 31.1%, cancers at 10.4%, other causes at 8.5%, and connective tissue disorders at 4.7%. Hepato-splenomegaly was seen in people with enteric fever, malaria, acute lymphoid leukemia, lymphoma, and hepatic abscesses, either by itself or in combination with other conditions. About 53% of people who were not diagnosed also had hepato-splenomegaly at the same time. Conclusion: Infections are the primary cause of PUO (pyrexia of unknown origin) in children, with undiagnosed cases being the second most common cause. An incremental approach is beneficial in the process of diagnosing a condition. Non-invasive examinations are used to diagnose infections and connective tissue disorders, while invasive investigations are used to diagnose cancer and other ailments. According to this study, the prevalence of undiagnosed diseases is still remarkable, so extensive historical analysis and physical examinations are necessary in order to provide a precise diagnosis.

Keywords : children, diagnostic challenges, fever of unknown origin, pediatric fever, undiagnosed diseases

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