

## Chapter 15

### Fever of Undetermined Origin (Pyrexia of Unknown Origin)

0.5% of new episodes of illness in UK; 0.2% of ambulatory care visits in USA

**Agents:** multisystem/collagen vascular disease (19% total, 30% in elderly, 17% in children; juvenile rheumatoid arthritis, serum sickness, vasculitis, drug fever, systemic lupus erythematosus, erythema multiforme, rheumatic fever, mixed connective tissue disease infection, granulomatous hepatitis, temporal arteritis, sarcoidosis), neoplasm (28% total, 2% in children; Hodgkin's disease, non-Hodgkin's lymphoma, leukemia, preleukemia, aleukemia, hypernephroma, hepatoma, atrial myxoma), infection (11% total, 30% in elderly, 17% in children; tuberculosis, infectious endocarditis, intraabdominal and intraperitoneal abscesses, osteomyelitis, urinary tract infections, biliary tract infections; uncommonly, Q fever, brucellosis, salmonellosis, toxoplasmosis, disseminated mycosis, chronic meningococemia, psittacosis, relapsing fever, typhus, lymphogranuloma venereum, cytomegalovirus, Epstein-Barr virus), miscellaneous causes (regional enteritis, factitious fever, exaggerated circadian temperature variation, pulmonary embolism, alcoholic hepatitis, familial Mediterranean fever, Whipple's disease, periodic fever, CNS lesion), no diagnosis (5% in adults, 16% in children)

**Diagnosis:** fever for at least 21 d, oral temperature of 38.3°C or greater on several occasions, no established diagnosis after 1 w of clinical investigation; white cell count (leucopenia in miliary tuberculosis, brucellosis, lymphoma, systemic lupus erythematosus) and differential (monocytosis in bacterial endocarditis, tuberculosis, brucellosis, solid tumour, Hodgkin's disease, inflammatory bowel disease; lymphocytosis in tuberculosis, infectious mononucleosis, cytomegalovirus infection), direct examination of blood, erythrocyte sedimentation rate (elevated in subacute bacterial endocarditis, lymphoma, giant cell arteritis, rheumatic fever, Still's disease), alkaline phosphatase (elevated in subacute thyroiditis, obstructive or infiltrative disease of the liver, hypernephroma, Still's disease, Hodgkin's disease, giant cell arteritis) and other liver function tests (SGOT), ASOT, rheumatoid factor (positive in subacute bacterial endocarditis), antinuclear antibody test, serum uric acid, calcium and phosphorous, urinalysis, stool guaiac; chest X-ray, multiple blood cultures, skin tests, gastrointestinal X-rays, intravenous pyelogram and renal ultrasound, liver/spleen scan and ultrasound, echocardiography, abdominal computerised axial tomography scan, ultrasound or gallium scan, ventilation/perfusion lung scan, acute and convalescent sera for Q fever, cytomegalovirus, toxoplasmosis, brucellosis, trichinosis, psittacosis and infectious mononucleosis, lumbar puncture, bone survey or scan, panorex of mandible; pulmonary angiography, coeliac axis angiography, liver biopsy, bone marrow biopsy, lymph node biopsy, temporal artery biopsy, exploratory laparotomy (only if there is objective clinical evidence of abdominal disease); therapeutic trial with steroids if giant cell arteritis suspected, salicylates if Still's disease or rheumatic fever, antimicrobials if tuberculosis or infective endocarditis

**Factitious Fever:** lack of normal diurnal variation of temperature, extreme pyrexia (? 42°C), normal examination and laboratory data, temperature-pulse dissociation, recovery of multiple or unusual organisms in blood culture, lack of ill appearance of patient

**Treatment:** dependent on cause