

Tuberculosis

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Tuberculosis (TB) infection of the central nervous system (CNS) represents haematogenous spread from primary pulmonary foci. A high index of suspicion is required, especially when population or individual risk factors are present. TB can result in a diverse but overlapping spectrum of pathology, including in the head: /uni25CF tuberculous meningitis – this commonly affects young children; CT demonstrates intense meningeal enhancement and hydrocephalus is a common complication; /uni25CF tuberculoma – discrete tumour-like granulomas at the base of the cerebral hemispheres, presenting with mass effect; /uni25CF tuberculous abscess – seen predominantly in immunocompromised hosts, this represents progression of a tuberculoma with prominent central caseating necrosis; Percival Pott, 1714–1788, surgeon, St Bartholomew's Hospital, London, UK. Besides the 'puffy tumour', described in 1760, Pott established the first association between a cancer and an environmental carcinogen, when he noted the high incidence of (squamous cell) scrotal cancers in chimney sweeps. Franz Ziehl, 1857–1926, German bacteriologist and professor in Lübeck, Germany. Friedrich Carl Adolf Neelsen, 1854–1894, German pathologist and professor at the Institute of Pathology, University of Rostock, Germany. - /uni25CF miliary tuberculosis – describes a diffuse distribution of multiple small tuberculomas throughout the brain substance. Where the meninges are involved, lymphocytes can be expected to predominate in the CSF, rather than the polymorphs seen with other bacterial meningitides. The increase in protein content and reduction in glucose concentration are also less marked. Ziehl-Neelsen staining for mycobacteria is frequently negative, and polymerase chain reaction (PCR) testing offers relatively rapid diagnosis compared with culture for acid-fast bacilli, which may take weeks. A 20- to 30-mL CSF sample allows spinning to increase the culture yield. Management is with antituberculous therapy; hydrocephalus may require shunt insertion. -

Figure 48.12 Axial computed tomography scan with contrast showing a right hemisphere subdural empyema (short arrow) and a right frontal Pott's puffy tumour (long arrow) (osteomyelitis of the frontal bone).

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