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TO TEST OR NOT TO TEST? WHAT BLOODS ARE DONE AT DEVELOPMENTAL CLINIC?

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Aims: To audit blood tests performed at a developmental clinic against recognised standards.

Methods: Term children referred to the neurodevelopmental clinic in a busy tertiary paediatric hospital from 2007 to 2009 were included in the study. The hospital laboratory database, patient charts and the genetic/chromosomal analysis ledger were interrogated. The national metabolic unit was also consulted on all patients to ensure accuracy of results. A coding system was devised for whether an investigation was normal, abnormal, not requested or result unavailable and applied to our cohort. The information was collated in an Excel spreadsheet and analysed. Investigation of children attending the neurodevelopmental clinic is completed in concordance with evidenced based guidelines[1].

Results: 250 term children from that time period were identified and the blood tests performed reviewed. The tests most routinely performed are U&E's 54% (136) with 10% of those abnormal and 45% (112) had serum amino acids assessed 30% of which were abnormal. Other tests include lactate 35% (89) checked of which 23% (21) were abnormal, 33% (83) had chromosomal analysis, with 1 abnormality identified and27% (68) had Fragile X screening, with no abnormality detected.

Conclusions: This audit has highlighted the lack of concordance with the advised standards and raises questions regarding appropriateness of certain tests. These results warrant the introduction of a standardised proforma investigation sheet for these cases followed by repeat audit.

Reference:

1. Investigation of global developmental delay.L McDonald et al. Arch Dis Child 2006;91:701-705

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CASE REPORT: THE SPECTRUM OF OUTCOME FROM CAVERNOUS SINUS THROMBOSIS

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Cavernous sinus thrombosis is a rare but serious complication of infections in the face and throat. We present two case reports demonstrating the spectrum of outcome in children.

Case 1: An 11 year-old boy presented with a four-day history of frontal headache and pain in his right eye. At presentation he was alert, had right ptosis and bilateral orbital cellulitis. An urgent CT head did not reveal any brain or meningeal involvement, but MRI demonstrated frontal sinus empyema with bilateral cavernous sinus thrombosis. The causative organism isolated was sensitive S.milleri. He improved well following 10 days of antibiotics and prophylactic anticoagulation was commenced. A repeat MRI 8 days later showed cavernous sinuses within normal limits.

Case 2: A two and a half year-old boy presented with a five-day history of being unwell and a 24-hour history of altered conscious level. On arrival, he had a GCS of 11, left eye cellulitis and a third nerve palsy. An urgent CT head revealed a retropharyngeal abscess, thrombosis of left internal jugular vein and bilateral cavernous sinus thrombosis. The retropharyngeal abscess was drained surgically and broad-spectrum antibiotics and anticoagulation were instituted. The causative organism isolated was H. influenza. Within 36 hours, there was bilateral internal carotid artery thrombosis leading to global hypoxic ischaemic encephalopathy confirmed on EEG and MRI. The child died a few days later on a palliative care pathway.

Conclusion: CST carries a reported mortality of 40%. We conclude that despite prompt treatment the range of outcome is still extensive.