Diagnostic and prognostic value of C-reactive protein in childhood meningitis

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Septic meningitis is a life threatening disease, which requires rapid andaccurate diagnosis and prompt treatment if disabiliting sequelae are tobe minimized. On the other hand, aseptic meningitis in most cases is aself limited disease which usually require symptomatic treatment.Whether it is septic or aseptic is the critical question in meningitis.Many tests have been designed to answer this question. However, mostof them are too complicated to be available in the emergency situationsespecially in the developing countries. Also, the overlop betweenbiochemical and cytological analyses in different types of meningitisposes a continuous problem for the clinician in charge of the patient..The aim in this study was to look at the reliability of serum C.R.P. in :l-Differential diagnosis between septic and aseptic meningits.2-Differentiation between complicated and non complicated cases ofseptic meningitis.3- Early detection and follow up of complications in cases of septicmeningitis .In this study 45 cases of meningitis (selected from 180 cases withC.N.S. infections) were included.Every cases was subjected to the following :1) Cmplete hisory taking and complete clinical examinations.2) Blood examinations.3) C.S.F. examinations.4) Follow up by serial serum C.R.P. determinations.The 45 cases were divided into two main groups:(l) GrolLp one:Included 15 patients with aseptic meningitis.(2.1Grollp two:Included 30 patients with septic meningitis.Group two was further subdivided into two subgroups :a) Subgroup (a) which were non complicated cases and included 19casesb) Subgroup (b) which were complicated cases and included 11cases.CRP. was determined two times on the average for patients with aseptic meningitis(one on admission and another on discharge) Andseven times on the average for patients with septic meningitis(fromadmission until discharge every other day).In this study we found that:I-By clinical examinations we can strongly suggest meningitis but wecan not differentiate between septic and aseptic meningitis.2-Blood examinations including white blood cell count and bloodculture (and not blood glucose) were significant in differentialdiagnosis between septic and aseptic meningitis. However, they needtime, cost and an experience more than that required for C.R.P.determination.3-C.S.F. examinations including , aspect, protein, glucose andculture(and not C.S.F. tension) were significant in differentialdiagnosis between septic and asptic meningitis. However, they needtime, cost and an experience more than that required for C.R.P.determination.4-Serum C.R.P. determination was proved to be:i) Highly significant in the differential diagnosis

between septic andaseptic meningitis.ii) Highly significant in the differential diagnosis between asepticmeningitis and partially treated septic meningitis before admission tothe hospital.iii) Significant in differentiation between complicated and noncomplicated cases of septic meningitis.iiii) a cheap, rapid, simple and easy to be performed in poor districtswith limited laboratory -resources.RECOMMENDA110NSAccording to our study we should minded by :l Meningitis must be considered as a serious life threatening disease.2-The clinical criteria for diagnosis of meningitis must be in the mindof every clinician especially who are in contact with patients living inpoor districts3-C.R.P. is a cheap, reliable, rapid, simple test and easy to beperformed which must be a vailable and done for meningitis patientsespecially in districts with limited laboratory resources.4-We must establish a program for early diagnosis and management ofmeningitis especially neonatal meningitis.