INTRODUCTION

Neonatal sepsis is one of the major causes of morbidity and mortality in the newborn. Surviving infants can have significant neurological sequelae as a consequence of central nervous system (CNS) involvement, septic shock or hypoxemia secondary to severe parenchymal lung disease **(*Chacko and Sohi, 2005).***

Diagnosis of neonatal sepsis may be difficult because clinical presentations are often non-specific,bacterial cultures are time-consuming and other laboratory tests lack sensitivity and specificity ***(Kocabas et al.,2007).***

It is vital to identify infected neonates as early as possible ,but the unreliable clinical science and the absence of good diagnostic tests hinder an accurate early diagnosis. Sick neonates are frequently treated with broad spectrum antibiotics, but true infection is only verified in a minority of cases ***(Gerdes et al.,2006).***

Previousely, various white blood cell count and the acute phase reactant ,c-reactive protein (CRP), have been used to diagnose neonatal sepsis.CRP is sepcific but less sensitive in the early stages of neonatal sepsis ***(Mathers et al. ,2005).***

Alpha-1acid glycoprotein (α1AGP) is an acute –phase serum protein that is produced by the liver in response to inflammation and infection.It is a 183 amino acid protein with five n-linked glycans that comprise 45% of its 43 KDa mass. Alteration of N-glycosylation is associated with certain pathophysiological states. Alpha-1 acid glycoprotein belongs to the lipocalin family and binds numerous basic and neutral lipophilic drugs and steroid hormones ***(Colombo et al.,2006).***

Alpha 1 acid glycoprotein is one of the major acute phase proteins in humans ,rats, mice and other species.

As most acute phase proteins, its serum concentration increases in response to systemic tissue injury, inflammation or infection ,and these changes in serum protein concentrations have been correlated with increases in hepatic synthesis ***(Urien et al. ,1991).***