

# ASO Titre and Serum Complement ( $C_3$ ) in Post-Streptococcal Glomerulonephritis.

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## SUMMARY

ASO titres and  $C_3$  levels were estimated in 151 cases of acute glomerulonephritis. The diagnosis of glomerulonephritis was confirmed by kidney biopsy in 101 cases. Sixty-two patients belonged to the group of PSGN and rest 89 to the group of NSGN. Significantly elevated ASO titres and low levels of  $C_3$  were seen in both the groups of patients. Out of 151 patients, 55 were studied from the symptomatic onset of the illness. 96% of the patients belonging to PSGN and 51.7% of the patients belonging to NSGN showed significantly elevated ASO titres at the onset of illness. Similarly, low levels of  $C_3$  were found in 88% of the patients belonging to PSGN and 38% of patients belonging to NSGN groups. However, in the group of PSGN, 95% of the patients showed a return of  $C_3$  levels to normal within 8 weeks of the illness. Hence the combination of elevated ASO titres with low values of  $C_3$  at the onset which returns to normal within 8 weeks can confirm the diagnosis of PSGN without the need for kidney biopsy.

## INTRODUCTION

The concepts regarding the pathology of acute glomerulonephritis have changed considerably over the decades. With the advent of renal biopsy, an invasive procedure, histology has evolved itself as an important tool in the diagnosis and prognosis of glomerulonephritis.<sup>1, 9, 12</sup> However, in post-streptococcal glomerulonephritis (PSGN) the kidney biopsy reveals typical but not pathognomonic features.<sup>3, 8, 15</sup> This paper emphasises the value of combined estimations of ASO titres and  $C_3$  levels in the definitive non-invasive diagnosis of PSGN in patients presenting as acute nephritic syndrome.

## MATERIAL AND METHODS

One hundred and fifty one cases of glomerulonephritis followed up in the Nephrology Department of the K.E.M. Hospital, Bombay, were studied during a period of 3 years. The diagnosis of glomerulonephritis was confirmed by kidney biopsy in 101 cases. Fifty cases who had a benign and self-limiting course on clinical and laboratory grounds were not subjected to biopsy. There were 77 males and 74 females with an age range from 2-45 years. Sixty two patients belonged to the group of PSGN and 89 to non-streptococcal glomerulonephritis