

## Study of Humeral Immunity and Complement Activity in Diabetes Mellitus in Vidarbha Region of Maharashtra

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### Abstract

**Background:** Diabetes mellitus is the most common of the serious metabolic diseases. Diabetes patient is susceptible to a series of complications that cause morbidity and premature mortality. Several aspects of immunity are altered in patients with diabetes mellitus, polymorphonuclear leukocyte function is depressed. The clinical data on humoral immunity is limited. **Materials and Methods:** This study comprises of 305 patients of diabetes mellitus with or without soft tissue infections attending or admitted to Government Medical College Nagpur. Presence of any metabolic complications of diabetes mellitus like, diabetic ketoacidosis/ketonuria, diabetic hyperosmolar coma were excluded from the study. **Results:** There was increase in IgG level in diabetes mellitus patients i.e. 2146.11 mg/dl as compared to control (1525 mg/dl) also increase in Ig A level in diabetes mellitus patients (307.07 mg/dl) as compared to control (158 mg/dl) and IgM in diabetes mellitus patients (190.32 mg/dl) as compared to control (150 mg/dl). But there was decrease in level of C3 in diabetes mellitus patient (97 mg/dl) compared to control (120 mg/dl). All these differences were statistically significant. IgG, IgA IgM an C3 in patients of diabetes mellitus with or without infections and associated factors shows no difference in level. **Conclusion:** There is significant raise in IgG, IgA, IgM levels indicating overall stimulation of humoral immune system in diabetes mellitus and significant depletion of complement component C3.