ETIOLOGICAL EVALUATION OF IDIOPATHIC GRANULOMATOUS MASTITIS

BY A PROSPECTIVE CASE CONTROL STUDY

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ABSTRACT

BACKGROUND: Granulomatous Mastitis is a chronic inflammatory condition affecting the breasts in young women, usually within 5 years of childbirth and lactation. Patients often present with multiple recurrences and relapses hence posing a diagnostic and therapeutic challenge to the treating physician. The etiopathogenesis of this disease is not well understood, often leading to its mismanagement. An understanding of the causative factors and pathogenesis would help in defining the diagnostic criteria, therapeutic strategies and preventive measures.

OBJECTIVES:

PRIMARY OBJECTIVES:

1. To test for uncommon infections in the breast as the cause of IGM by routine bacterial smear and culture, AFB smear and culture for typical and atypical mycobacteria and special tests for fungal etiology.
2. To assess serum markers for autoimmunity (ANA, specific autoantibodies, Immunoglobulin levels) in patients with IGM.

SECONDARY OBJECTIVES:

1. To analyse demographics and clinical profile of patients with IGM.

2. To analyse individual hormonal profile and breastfeeding practices as possible risk factors in IGM.

METHODS USED:

The study design was prospective case-control study. Cases comprised of patients with a histopathological diagnosis of Granulomatous mastitis. Controls were normal women without Granulomatous Mastitis who were group matched with individual cases for age (Age +/- 5 years) and childbirth (Last childbirth <5 years). All cases and controls underwent a one-on-one interview with the help of a structured, validated questionnaire. Serum sample was analysed for Serum Anti-Nuclear antibody, Serum Prolactin and Serum Globulin. Further analysis for specific autoantibody and Immunoglobulin levels was done if ANA was positive or globulin levels were elevated. Tissue sample was analysed for microbial growth in culture media. Data collected from thirty cases and thirty group matched controls was analysed for statistically significant association.

RESULTS:

There was no evidence of uncommon infections caused by bacterial, mycobacterial or fungal pathogens. Markers for systemic autoimmunity such as Serum ANA, Immunoglobulin levels did not show any positivity amongst our cases. There was no significant hyperprolactinemia in our cases. The role of other risk factors such as breastfeeding practices, clothing habits,
application of local substances, local trauma, dietary habits, hygiene practices, habitual substance usage, environmental exposure, hormonal factors, pregnancy-related factors and other illness-related factors were also not found to be significant. The etiology of Granulomatous mastitis continues to be elusive. The role of localised autoimmunity will have to studied further.