Auramine method was found to be superior to Modified Fite-Faraco sensitive for detecting lepra bacilli in lepromatous pole. The 19(100%) BL/LL biopsies and all 6(100%) respectively while Auramine detected bacilli in all BL/LL Modified Fite-Faraco detected bacilli in 11 out of 13(84.6%) respectively. Biopsies from BB were positive by both the methods. In BTH patients were positive by Auramine and Modified Fite-Faraco. 42(62.7%) out of 67, and 20(29.9%) out of 67 cases 12(42.9%) showed bacilli by Auramine and Modified Fite-Faraco while only 41 by Modified Fite- Faraco. Out of 28 indeterminate cases 12(42.9%) showed bacilli by Auramine and 2(7.1%) by Modified Fite-Faraco. 42(62.7%) out of 67, and 20(29.9%) out of 67 BTH patients were positive by Auramine and Modified Fite-Faraco respectively. Biopsies from BB were positive by both the methods. In BL/LL Modified Fite-Faraco detected bacilli in 11 out of 13(84.6%) and all 6(100%) respectively while Auramine detected bacilli in all 19(100%) BL/LL biopsies.

**Conclusion:** Auramine and Modified Fite-Faraco are equally sensitive for detecting lepra bacilli in lepromatous pole. The Auramine method was found to be superior to Modified Fite-Faraco especially in early spectrum of leprosy.