Background and Objectives: Mycobacterium tuberculosis is responsible for considerable human morbidity and mortality worldwide. Eight million new cases of tuberculosis are reported to occur each year, with up to 3 million death per year. This world-wide problem is increasing due to several factors, including multi-drug-resistant strains and co-infection with human immunodeficiency virus. Based on the presence or absence of an M. tuberculosis specific deletion (TbD1), mycobacterium tuberculosis strains respectively can be divided into ancestral and modern strains. Modern strains are including Beijing/w, Harlem, Africa, X and Delhi and also ancestral strains are including East-Africa-India. Based on the presence or absence of M. tuberculosis specific deletion (TbD1), M. tuberculosis isolates divided into ancestral and modern strains. The aim of the present study is to differentiate ancestral and modern M. tuberculosis in northwest of Iran.

Materials & Methods: 165 M. tuberculosis strains isolated from West and East Azarbaijan provinces of Iran. Ancient and modern M. tuberculosis isolates distinguished by primer specific PCR for the TbD1 sequence presence.

Results: Our study showed that 49 (29.7%) of isolates were modern M. tuberculosis and 116 (70.3%) were ancestral M. tuberculosis. Among the 53 isolates from west Azerbaijan 19 (35.85%) were modern TB and 34 (64.15%) were ancestral TB (table1) whereas among the 112 isolates from East Azerbaijan 30 (26.79%) were modern M. tuberculosis and reminding (73.21%) were ancestral M. tuberculosis.

Conclusion: Prevalence of modern M. tuberculosis in West Azerbaijan was relatively higher than East Azarbaijan. Considering the increasing rate of modern M. tuberculosis in our studied region and in world, which has resulted in multi-drug resistance, and low preventive effect of BCG vaccine, the fast diagnosis, prevention, treatment and more controlling programs of infection is important in this region.

: TbD1, modern tuberculosis, ancestral tuberculosis, PCR

Presentation: Poster