In this study we aimed to determine the seroprevalence of rubella in a tertiary referral center in Ankara, Turkey. A retrospective, cross-sectional study was performed from 2008 to 2017 at the outpatient clinic of Zekai Tahir Burak Women’s Health Care, Training and Research Hospital in Ankara, Turkey. The study included 94,508 pregnant women and the patients were evaluated in terms of IgG and IgM status, IgG avidity and amniotic fluid PCR testing if needed. Seropositivity for anti-rubella IgG and IgM were 89% and 0.19% respectively. One hundred seventy-five patients with IgM positivity were tested by avidity test; 114 patients were found to have high avidity and 57 patients low avidity. Four patients accepted PCR testing and no positive result was found. In our sample of the Turkish population, the rate of rubella IgG seropositivity was high, suggesting that the routine national vaccination program for rubella is successful. Screening and vaccination of childbearing-aged women and updating the national vaccination policy would be effective for periodic decreases in immunity.