We perform a parametric study for simple elliptical dynamic models of rupture propagation. We simulate the earthquake from the central part of Japanese prefecture Tottori in 2016 using a code for a simulation of the rupture propagation developed at the Department of Geophysics assuming the classic linear slip-weakening friction law. We evaluate the match of synthetic seismograms with the observed data. From different models we choose the one best fitting the data. The values of seismic moment, slip distribution, stress drop, radiated energy and radiation efficiency are close to the ones from published articles. In conclusion we point out some possible sources of inaccuracies in modelling and suggest improvements for the future.