Variations in the solar wind dynamic pressure can create changes in the auroral brightness, especially in the dayside auroras. In this study, by using Polar Ultraviolet Imager (UVI) auroral images and NASA OMNI magnetic field and plasma data, we investigate the relationship between interplanetary parameters and dayside aurora intensification. We first identify the dayside aurora cases caused by the solar wind dynamic pressure increases through 1998 and 1999, and divide these cases into two types: one with intensification and another without significant intensification following the increase of the solar wind dynamic pressure. Then we case by case examine the separate role of the solar wind density and velocity on auroral brightness. Our result demonstrates that the dayside aurora intensification requires the contributions of both the density and solar wind velocity increases. The dynamic pressure increase only by the density could not create the dayside aurora intensification.