The aim of this study was to compare the effect of aging technique (dry-aging and wet-aging), aging time (0, 21, 42 and 63 days) and packaging during display (vacuum and shrinkable film wrapping) on pH, tenderness, pigment and lipid stability of beef. Three longissimus dorsi muscles from two Belgian Blue cows were dry- or wet-aged for up to 63 days at 2 °C. At different times, part of these samples was cut into steaks and repackaged in vacuum bags or shrinkable film, and stored during 4 days at 4 °C + 8 days at 8 °C (simulated retail display). The following parameters were evaluated at different intervals: pH, tenderness (Warner–Bratzler shear force), color (CIE L*a*b*), myoglobin oxidation (K/S 572/525 ratio) and lipid oxidation (TBARS). The aging technique and the packaging during simulated retail display had an effect on pH (dry-aging > wet-aging, $P < 0.05$; shrinkable film > vacuum, $P < 0.05$). An increase of tenderness was observed during the first 21 days of aging ($P < 0.05$). The sensitivity of samples to pigment oxidation was influenced by the packaging during display (shrinkable film > vacuum, $P < 0.05$). Aging time and packaging during display increased lipid oxidation (42 and 63 > 0 and 21 days, $P < 0.05$; plastic wrap > vacuum, $P < 0.05$). This study contributes new knowledge about Belgian Blue beef behavior whether it is wet- or dry-aged. Further research will be conducted to study the antioxidant capacity of these meats in order to better understand the oxidation process.