In this paper we investigate the second-order difference equation
\[ x_{n+1} = \frac{C x^2_{n-1} + E x_{n-1} + F}{a x^2_n + d x_n + f} \]
where the initial conditions \( x_{-1} \) and \( x_0 \) are arbitrary nonnegative numbers and the parameters satisfy \( C, E, F, a, d, f \geq 0, C + E + F > 0, \) and \( a + d > 0. \) Using the theory of monotone systems, we provide some results on the global character of this equation with the basins of attraction of its equilibria and periodic solutions. (Received September 21, 2015)