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Thinh Kieu* (thinh.kieu@ung.edu), 2514 Education Way Apt#2514, Oakwood, GA 30566, and
Luan Hoang (luan.hoang@ttu.edu), Lubbock, TX. *Global estimates for generalized Forchheimer flows of slightly compressible fluids in porous media.*

we consider the generalized Forchheimer flows for slightly compressible fluids and study the initial boundary value problem for the resulting degenerate parabolic equation for pressure with the time-dependent Dirichlet boundary condition. The estimates up to the boundary and for all time are derived for the L^∞ -norm of the pressure, its gradient and time derivative. Large-time estimates are established to be independent of the initial data. Thanks to the special structure of the pressure's nonlinear equation, the global gradient estimates are obtained in a relatively simple way, avoiding complicated calculations and a prior requirement of Hölder estimates. (Received August 11, 2015)