

Chicken extract affects colostrum protein compositions in lactating women

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摘要

Abstract

This study investigated the effect of supplementation with chicken extract on plasma and colostrum protein compositions in lactating women. Thirty healthy pregnant women were evenly divided into the control (n = 15) or chicken extract (CE) group (n = 15). The CE group was given one bottle (70 mL/bottle) of chicken extract three times a day to provide 18 g protein from the 37th week pregnancy to 3 days postpartum. All women in the CE group consumed chicken extract at least for 2 weeks (18 $\pm$ 5 days). High protein supplement was restricted in the control group. Blood samples were collected during the 37th week pregnancy and 3-day postpartum, and milk was collected during 3-day postpartum. The results showed that plasma total protein was significantly lower by 14% in the CE group compared with that in the control group during 3-day postpartum. Plasma epidermal growth factor (EGF) significantly elevated by 236% during 3-day postpartum compared with those during the 37th week pregnancy in the CE group. The levels of lactoferrin, EGF, and transforming growth factor-beta2 (TGF-beta2) in colostrum significantly increased by 34%, 62%, and 196%, respectively, in the CE group compared with those in the control group. However, the levels of total protein, casein, lactalbumin, and secretory immunoglobulin A in colostrum did not significantly differ between two groups. Therefore, supplementation with chicken extract increased colostrum levels of lactoferrin, EGF, and TGF-beta2, which are important for the growth and immune functions of the infants, in lactating women.