

## عنوان مقاله:

Physiological Adaptive Indicators in Fasted Neonate Broiler Chicks in Response to Calcium Gluconate Injection

## محل انتشار:

مجله علوم طیور، دوره 3، شماره 1 (سال: 1394)

تعداد صفحات اصل مقاله: 12

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## خلاصه مقاله:

Four hundred and eighty mixed-sex broiler chicks aged 3 hrs after hatching were allotted according to a completely random design in a  $6 \times 2 \times 2$  factorial schedule into 2 groups of 12 replications of 20 chicks each. The main experimental factors were fasting for 0, 6, 12, 24, 36, and 48 hrs after chick placement, calcium gluconate (Ca-glu) injection (0 and 0.6 mL) and sex (male and female). Independent of sex, live body weight (BW) of chicks decreased linearly ( $Y=43.36-0.109BW0h$ ,  $r^2=0.876$ ) as neonatal fasting extended. Injection of 0.6 mL Ca-glu at 3 hrs post hatching did not affect weight loss of chicks. Yolk residuals (YR) utilized linearly ( $Y=5.75-0.062YR$ ,  $r^2=0.956$ ) by 0.062 g/hr in neonate fasted chicks showing no effect for Ca-glu injection. Neonatal fasting periods longer than 12 hrs increased liver weight (P). The mean absolute and proportional (% of BW0h) breast and leg weight were reduced linearly as neonatal fasting extended (P). Serum glucose concentration in both sexes increased up to 6 hrs fasting, then reduced linearly to 150 mg/dL after 48 hrs feed withdrawal. The Ca-glu treatment influenced serum glucose level for a short period up to 6 hrs of fasting. Serum Ca concentration sharply increased up to three-fold in the birds received Ca-glu injection resulting in acute hypercalcemia, then decreased to the initial level after 24 hrs feed withdrawal. The mean serum level for creatinine, uric acid, cholesterol, HDL, albumins and total proteins significantly increased during the fasting periods of 6 to 48 hrs and significantly elevated in the birds received 0.6 mL Ca-glu injection compared with the non treated chicks. It was concluded that subcutaneous administration of 0.6 mL Ca-glu in the chick s neck did not suitably support the increased metabolic demands for glucose and calcium in feed deprived .neonate chicks

## کلمات کلیدی:

Yolk residuals, Calcium gluconate, Serum biochemistry, Post hatch fasting, Newly hatched chicks

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