Assessment of Cattle Welfare Traveling Long Distance from Jessore (Indian Border) to Chittagong, Bangladesh

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Abstract : Animals are transported from one place to another for different purposes in Bangladesh. However, the potential effect of long-distance transport on cattle health has not frequently been studied. Therefore, this study was conducted to assess health conditions of cattle transported from a long distance to Chittagong in Bangladesh. A total of 100 adult cattle, regardless of breed and sex, were selected at Benapole live cattle market in Jessore between August and September 2015 for the study. Blood samples were taken from 50 randomly selected cattle at 0 hours before transportation, just after transportation, at 12-16 hours post-conclusion of transportation, and 24 hours after transportation. The external health conditions and injuries of the cattle were assessed by close inspection, and the trader was interviewed using the structured questionnaire. Images of cattle injuries were taken with a camera. The basic internal health of the cattle was evaluated using standard hemato-biochemical tests. Animals were fasted and remained standing within a small space allocation (8-10 sq feet/animal) in the vehicle during transportation. Animals were provided only with paddy straw and water prior to selling at the destination market. The overall frequency of cattle injuries varied significantly (26% before vs. 47% after transportation; $p < 0.001$). The frequency of different cattle injuries also significantly varied by types such as abrasion (11% vs. 21%; $p < 0.05$) and barbed wire injury (9% vs. 18%; $p < 0.05$). Single cattle injury differed significantly (21% vs. 36%; $p < 0.001$). Cattle health conditions varied significantly (nasal discharge: 15% vs. 28%; $p < 0.05$; diarrhea: 15% vs. 23%; $p < 0.05$ and severe dehydration: 8% vs. 20%; $p < 0.001$). The values of hemoglobin (Hb), total erythrocyte count (TEC), total leukocyte count (TLC), lymphocyte (L), neutrophil (N) and eosinophil (E) varied significantly ($p \leq 0.01$) (Hb: 11.1mg/dl vs. 12.3mg/dl; TEC: 4.7 million/ml vs. 5.7million/ml; TLC: 6.2 thousand/ml vs. 7.3 thousand/ml; L: 61.7% vs. 58.1%; N: 29.7% vs. 32.8%; E: 3.8% vs. 4.7%). The values of serum total protein (TP), creatine kinase (CK), triglyceride (TG), calcium (Ca), phosphorus (P) and alkaline phosphatase (ALP) significantly differed ($p \leq 0.05$) (TP: 6.8g/dl vs. 8.2g/dl; CK:574.9u/l vs. 1288u/l; TG: 104.7mg/dl vs. 127.7mg/dl; Ca: 11.3mg/dl vs. 13mg/dl; P: 7.3mg/dl vs. 7.6mg/dl; ALP: 303u/l vs. 363u/l). The identified status of external and internal health conditions of the cattle for trading purpose due to long-distance transportation in the present study indicates a high degree of transport stress and poor animal welfare.

Keywords : animal welfare, cattle, external and internal health conditions, transportation
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