
SERUM BIOCHEMISTRY PROFILE FOR NESTING HAWKSBILLS (*ERETMOCHELYS IMBRICATA*) IN RIO GRANDE DO NORTE, BRAZIL*

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Forty one nesting females of *Eretmochelys imbricata* were sampled from Barreira do Inferno and Pipa, located in the State of Rio Grande do Norte, Brazil, from January to March 2011 and from January to March 2012 respectively. Blood samples (10 ml) were withdrawn from the dorsal cervical sinus into tubes without anticoagulant. The triglycerides (1033 mg/dl \pm 202) and cholesterol concentrations (287 mg/dl \pm 42) were significantly higher than in literature. Both are likely to be raised in nesting females due to vitellogenesis. The average values for total protein were 5.45 g/dl \pm 0.63 and 2.11g/dl \pm 0.43 for albumin. Serum protein levels are often elevated during the reproductive season due to vitellogenesis, which requires increased protein synthesis. Additionally, elevated albumin may be associated with increased demand for egg production. On the other hand, urea values (20.6 mg/dl \pm 4.2) were slightly lower than those reported for adult individuals of *Caretta caretta*, *Chelonia mydas*, *Eretmochelys imbricata* and *Lepidochelys kempii*, outside reproductive period. Mean uric acid values (0.95 mg/dl \pm 0.17) were slightly higher than those reported for nesting leatherbacks. Even higher values were found in juvenile green turtles (1.5 mg/dl \pm 0.6) probably because young *C. mydas* are primarily carnivores and according to literature, carnivorous reptiles have higher uric acid blood levels. Moreover, uric acid levels are expected to be higher in foraging sea turtles, as the animals feed daily. The mean calcium (11.6 mg/dl \pm 0.25) and phosphorus (11.3 mg/dl \pm 1.4) values were similar to those reported for reproductively active leatherbacks. Both minerals are likely to be elevated in nesting sea turtles due to vitellogenesis and egg production. The mean sodium (139.6 mEq/l \pm 3.5), and potassium levels (5.09 mEq/l \pm 0.76) were also similar to reports for nesting sea turtles. The average values for Alanine aminotransferase (ALT) reported here fall within the range found for nesting leatherbacks and loggerheads. The Aspartate aminotransferase (AST) activity (55.4 U/l \pm 17.1) was low when compared to other studies. Although little is known about the tissue distribution of AST in sea turtles, AST concentrations are not considered to be organ-specific in reptiles. Alkaline phosphatase (ALP) activity (15.9 U/l \pm 3.7) was similar to that suggested for adult sea turtles. Furthermore, ALP is associated with increased osteoblastic activity. Thus, it is probable that animals in development stage show higher enzymatic levels, since osteoblasts are responsible for bone matrix synthesis. The serum Gamma-glutamyl transferase (GGT) activity (10.8 U/l \pm 2.4) was similar to literature, although GGT is not a parameter frequently used to evaluate sea turtles health conditions, since it is normally low. Biochemical intervals reported here represent normal parameters for nesting hawksbills. However, there is still little published information regarding hawksbills biochemical profiles and further studies are urgently required. To our knowledge, this is the first study to report on biochemical reference intervals for nesting hawksbills in the southeastern Atlantic Ocean.