Peran Hormon Kortisol dalam Osmoregulasi Ikan Sidat, Anguilla bicolor, pada Lingkungan Bersalinitas

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Abstract	The osmoregulatory capacity of Anguilla bicolor in the sea water is influenced by hormonal activities.ÃƒÂ,Ã‚Â Therefore, the aim of this study was to know the influence of cortisol on osmoregulation of the eel at the different levels of salinity medium. An experimental method with six treatments on randomized completely design was used in this study. The treatments were (1) fish acclimated at water salinity 15 ppt without hormone injection; (2) fish acclimated at water salinity of 30 ppt without hormone injection; (3) fish acclimated at water salinity of 15 ppt and injected with 4 ÃƒÂ,Ã‚Âµg cortisol/gr body weight; (4) fish acclimated at water salinity 15 ppt and injected with 8 ÃƒÂ,Ã‚Âµg cortisol/gr body weight; (5) fish aclimated at water salinity of 30 ppt and injected with 4 ÃƒÂ,Ã‚Âµg cortisol/g body weight; (6) fish acclimated at water salinity of 30 ppt and injected with 8 ÃƒÂ,Ã‚Âµg cortisol/g body weight. All of the treatments were replicated four times. Data were analyzed using One way ANOVA followed by Least Significant Difference. The results showed that the cortisol has significant effect (P<.05) on plasma osmolality only at the early of acclimation on medium 30 ppt after injection, especially at 6 and 12 hours after cortisol treatment, and there was no significant efffect of cortisol treatment (P>.05) if the acclimation increased. Osmoregulatory capacity on medium of 15 ppt and 30 ppt were influenced by cortisol treatment at 6 hours acclimation (P<.05), but only that aclimated in medium opf 5 ppt was influenced by cortisol treatment at 12 hours acclimation. Increased acclimation on medium of 15 ppt and 30 ppt was not influenced by cortisol treatment (P>.05). Water body content was not influenced by cortisol treatment (P>.05) at all medium acclimation. At six hour acclimation, treatment cortisol has significant difference (P<.05) on hematocrite only at medium 30 ppt, but cortisol treatment has significant difference (P<.05) at medium 15 ppt and 30 ppt in 12 hours acclimation. Increased acclimation has no significant difference (P>.05) on treatment cortisol. Cortisol injection has no significant difference (P>.05) on plasma glucose on all medium and only on 7 days aclimation, the plasma glucose has significant difference (P<.05) after injected by cortisol. It could be concluded that cortisol treatment has a role on eel osmoregulation at early acclimation. Haematocrite account was also influenced by cortisol injection, but only at the early acclimation. Water body content, blood glucose and total body energy were not influenced by cortisol.
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