

PREFACE

The mouse submandibular gland contains number of biologically active polypeptides like epidermal growth factor, nerve growth factor, mesodermal growth factor, endothelial stimulating growth factor, epithelial growth factor, neural tube growth factor, wound contraction factor, renin, psuedorenin, tannin, and angiotensin, kallikrein, peptides and proteases, glucagon like material (IRG), erythropoietin, bone marrow colony stimulating factor, granulocytosis inducing factor, lymphoid thymotrophic factors, lethal factors. Most of it are localized in and synthesized by the cells of granular convoluted tubules (GCT) of submandibular gland.

The various organs of the body have long been known to be influenced by these growth factors. Atterdi in 1965 studied effect of a fraction of submandibular gland of mouse on tissues of mesodermal origin in vitro. Then Atterdi had observed almost complete loss of myosin which was indicated by loss of eosinophilia in myoblast of experimental cultures. From his experiment Atterdi had concluded that change in the muscle tissue in the culture is due to a component which is secreted by submandibular gland and having esterase and peptidase like activity.

After 1967 now nobody has tried to study the effect of this salivary gland secreted polypeptides on any mesodermal tissue or muscle. So our attempt is to study whether the polypeptides secreted by submandibular gland affects the skeletal muscle. To study this effect we have sialoadenectomised the mice at the age of 20 days when the polypeptides are started to be secreted by the submandibular gland. Then muscles are allowed to develop in absence of salivary gland secreted polypeptides and after 20 days, 40 days, 60days and 80days we have studied the protein content, electrophoretic separation of protein, LDH content and electrophoretic separation of LDH in the three skeletal muscles i.e. gastrocnemius, soleus and rectus abdominis.