

PANCREATIC INNERVATIONS IN HUMAN FETUS: AN OBSERVATIONAL STUDY

Aritra Banerjee

AIIMS, India

In the developing human pancreas, the cholinergic neurons are distributed singly or in the form of ganglia in the inter lobular connective tissue from 14WG and in the intra lobular connective tissue from 16WG onward. From 25–27 WG onward the typical adult type islets were observed. The aim of the study was to document the morphological changes of neurons and ganglia of human foetal pancreas at various gestational ages. The present study was performed on human foetuses (n=13) of different gestational ages. The sample collection was started after getting ethical permission from the Human Ethical Clearance Committee of AIIMS, New Delhi. Pancreatic tissue samples (Head, body and tail) from aborted foetuses aged 13– 40 weeks of gestation(WG) were processed. The neurons were studied by using NADPH-d and ChAT for enzyme histochemistry and immunohistochemistry. With increasing gestational age, the number of neurons in human foetal pancreas was appeared to be reduced in the head, body and tail of the pancreas and the ganglions were skewed towards the tail. The neurons were mainly surrounding the islets. Numerical density of cholinergic neural tissue is more in tail than body than head whereas, the nitrenergic neuronal tissue is more in head than body than tail in human foetal pancreas. The knowledge from this study may help in understanding the pathophysiology of various congenital disorders, relationship between the growth of neurons and islets cells in development of type 1 DM and pain due to pancreatitis.

aritra.aiims@gmail.com

