Three-dimensional analysis of the morphogenesis of nerve branches and vessels distributed to the heart and bronchial organs of embryos, using whole-mount immunohistochemical staining and moleculohistoochemical methods.

2001 Fiscal Year Final Research Report Summary

Three-dimensional analysis of the morphogenesis of nerve branches and vessels distributed to the heart and bronchial organs of embryos, using whole-mount immunohistochemical staining and moleculohistoochemical methods.

Research Project

Project/Area Number

12670010

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Field

General anatomy (including Histology/Embryology)

Research Institution

Kanazawa University

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Project Period (FY)

2000 – 2001

Keywords

development / peripheral nerve / heart / humans / house shrew / chick / rat / immunolhistochemistry

Research Abstract

In year of 2000, the branches of the synpathetic nerve which reach the heart through the venous porta was newly discovered in the hearts of house shrew (Smcus miriws). These nerve branches were observed to originate from the sympathetic trunk, and to course the azygos vein which course in parallel with this sympathetic trunk. Thereafter, these sympathetic (cardiac) nerve branches take a course along the brachiocephalic and superior caval vein, - entering the venous porta of the heart. These nerve branches are not observable through the common anatomical methods, and have not described in scientific papers. In our study, the existence of these heart nerve branch of this sympathetic nerve were clarified-by the method of what is called "whole-mount immunohistochemical staining method".
In 2001, on the base of the data mentioned above, we researched concerning the existence of the cardiac nerve of the sympathetic nerve trunk origin in human beings. The observation area of humans is greatly ⋯▾ More

Research Products (12 results)

All | Other

All | Publications

[Publications] 伊藤正明: "Length and width of the tendinous poriton of the palmaris longus :, a cadaver study of adult Jananese"Journal of Hand Surgery. 26. 706-710 (2001)

[Publications] 武田 明: "Anatomical aspects of biopsy of the proxinial fibula"Int. Orthop.. 24. 335 (2001)

[Publications] 木田雅彦: "Genetic characteristics of double hypoglossal canal as a nonmetric trait"Acta Anatomica Nipponica. 76. 369-373 (2001)

[Publications] 池田和夫: "Experimental study of peripheral nerve injury during gradual limb elongation"Hand Surgery. 5. 41-47 (2000)

[Publications] 田中 彰: "Expression of matrix metalloproteinase-2 in osteoarthritic fibrocartilage from human mandibular condyle"Journal of Oral Pathology and Medicine. 29. 314-320 (2000)

[Publications] 木田雅彦: "Sternalis muscle : topic for debate"Clinical Anatomy. 13. 138-140 (2000)

[Publications] lto MM., Aoki M, Kida MY, Kumaki K, Tanaka S.: "Length and width of the tendinous poritori of the palmaris longus : a cadaver study of adult Jananese"Journal Of Hand Surgery. 26. 706-710 (2001)

[Publications] Takeda A, Tsuchiya H, Mori Y, Tanaka S, Kikuchi S, Tomita K: "Anatomical aspects of biopsy of the proximal fibula"Int. Orthop. 24. 335-33 (2001)

[Publications] Kida MY, Johnson-DR, O'Higgins P, Sekii Y, Yoshizoe S, Tanaka S: "Genetic characteristics of double hypoglossal canal as a nonmetric trait"Acta Anatomica Nipponica.. 76(4). 369-373 (2001)

[Publications] Ikeda K, Tomita K, Tanaka S: "Experimental study of peripteral nerve injury during gradual limb elongation"Hand Surgery. 5(1). 41-47 (2000)

[Publications] Tanaka A, Kawashiri S, Kumagai S, Takatsuka S, Narinobou M, Nakagawa K, Tanaka S: "Expression of matrix metalloproteinase-2 in osteoarthritic fibrocartilage from human mandibular condyle"Journal of Jorunal of Oral Pathology and Medicine. 29. 314-20 (2000)

[Publications] Kida MY, Izumi A, Tanaka S: "Sternalis muscle : topic for debate"Chinical Anatomy. 13. 138-40 (2000)

URL: https://kaken.nii.ac.jp/report/KAKENHI-PROJECT-12670010/126700102001kenkyu_seika_hokoku_

Published: 2003-09-16