

RECENT PUBLICATIONS

(April 1995 - March 1996)

Department of Speech Science

A. Publications in English

A. 1. Publications in periodicals

A. 1. i. Original Contributions

Fukuda, M., Hata, A., Niwa, S., Hiramatsu, K., Yokokoji, M., Hayashida, S., Itoh, K., Nakagome, K. and Iwanami, A.: Event-related potential correlates of functional hearing loss: reduced P3 amplitude with preserved N1 and N2 components in a unilateral case. *Psychiatry and Clinical Neuroscience*, 50: 85-87, 1996.

A female patient exhibiting functional hearing loss in her left ear demonstrated reduced amplitude of P3 component in event-related potentials (ERP) to left monaural stimulation, with preserved N1 and N2 components to stimulation of either ear. This result suggested that stimuli in the affected ear were conducted successfully up to the auditory cortex but that further processing in higher brain regions was 'repressed'. Event-related potential examination for such hysterical disorders could be useful in clarifying their brain mechanism and offer a useful diagnostic clue to its nature.

Imaizumi, S., Hayashi, A. and Deguchi, T.: Listener adaptive characteristics of vowel devoicing in Japanese dialogue. *J. Acoust. Soc. Amer.*, 98: 768-778, 1995.

Listener adaptive characteristics of Japanese vowel devoicing were investigated by analyzing (i) dialogues between professional teachers and hearing-impaired (HI) or normal-hearing (NH) children, and (ii) speech samples read by the teachers as fast and clearly as possible (RD). The teachers reduced the devoicing rate and lengthened the moras more in the HI vs. NH samples, and even more in the HI vs. RD samples. A logistic regression analysis of the devoicing rate suggests that the speech rate dependency of the devoicing rate is different among the HI, NH, and RD samples. When moras are lengthened, the predicted devoicing rate decreases more for the HI vs. NH samples, and even more in the HI vs. RD samples, suggesting that not only rate-dependent adjustments but also rate-independent adjustments significantly effect devoicing reduction. These results suggest the following: (1) Professional teachers of hearing-impaired children reduce their devoicing not only by lengthening the interval of successive voicing/devoicing gestures, but also by re-sizing component gestures to

some extent, probably to improve the listener's comprehension; (2) Vowel devoicing should be represented in terms of parameters of speech motor control; and (3) It may be possible to develop an optimized communication method for hearing-impaired children by simulating such listener-adaptive adjustments in speech production.

Kiritani, S., Imagawa, H. and Hirose, H.: Vocal cord vibration in the production of consonants-observation by means of high-speed digital imaging using a fiberscope. *J. Acoust. Soc. Japan (E)*, 17: 1-8, 1996.

To Study voice source characteristics in speech, it is essential to record vocal cord vibration simultaneously with the speech signal and to analyze the relationship between the pattern of the vocal cord vibration and the acoustic characteristics of the speech signal. For the purpose of observing vocal cord vibration during running speech, a special high-speed digital image recording system using a fiberscope was developed.

In the present paper, the general features of the system are described, together with some preliminary results of an analysis of vocal cord vibration in the production of Japanese consonants. Characteristic differences in the pattern of vocal cord vibration between the voiced and the voiceless stop consonants /b/ and /p/, and between the fricatives /s/ and /h/ are described, with special reference to the spectrum characteristics of the inverse-filtered source wave of each consonant.

Maekawa, K., Kiritani, S. and Hirose, H.: Electromyographic study of focus and accent in Japanese. *J. Acoust. Soc. Jpn. (E)*, 16: 291-298, 1995.

In this paper, the physiological mechanism underlying the voice fundamental frequency (F_0) control was investigated at the phrasal level. A new method of correlation analysis between cricothyroid muscle activity and the resulting F_0 contour was proposed and applied to speech material varying in accentedness and focal conditions. Examinations of the difference between the observed F_0 contours and the F_0 contours estimated from the cricothyroid activity revealed interesting deviation tendencies that are related to the linguistic properties of speech material: accentedness; location of phrase in a sentence; and the presence vs. absence of focus. Another interesting finding was the strong suppression of the sternohyoid muscle activity under focus. The suppression was stronger in unaccented phrases than in accented ones. An interpretation of the suppression and its relationship to accent was proposed based on the notion of laryngeal state function proposed in Atkinson (1978).

A. 1. ii. Review Articles

none.

A. 1. iii. Contributions in Separate Publications

Hirose, H., Imaizumi, S. and Yamori, M.: Voice quality in patients with neurological disorders. in *Vocal Fold Physiology, Voice Quality Control*, edited by O. Fujimura and M. Hirano, Singular Publishing Group, Inc. San Diego, 235-248, 1995.

A. 1. iv. Translations

none.

A. 1. v. Progress Report

none.

A. 2. Contributions in Meeting, Proceedings etc.

Hayashi, R. and Kiritani, S.: Perception of focus in stress accent language (German) and non-stress accent language (Japanese). *The 8th International Congress of Phonetic Sciences, Stockholm, 3: 640-643, 1995.*

Hirose, H. and Imaizumi, S.: Acoustic evaluation of voice characteristics in patients with neurological disorders. *Proceedings of the XXIII World Congress of the International Association of Logopedics and Phoniatrics, Cairo, 1995, 164-167, 1995.*

Imaizumi, S., Hayashi, A. and Deguchi, T.: Acoustic and perceptual effects of listener adaptive temporal adjustments in Dialogue. in *Proceedings of the 8th International Congress of Phonetic Sciences, Stockholm, 1995, 492-495, 1995.*

Imaizumi, S., Mori, K., Kiritani, S. and Yumoto, M.: Neural representation of concurrent sound objects. in *Program and Book of Abstracts, Visualization of Information Processing in the Human Brain: Recent Advances in MEG and Functional MRI, Tokyo, 117, 1995.*

Kiritani, S.: Recent advances in high-speed digital image recording of vocal cord vibration. *The 8th International Congress of Phonetic Sciences, 4: 62-67, 1995.*

Koshida, I., Itoh, K., Hiramatsu, K., Yumoto, M. and Niwa, S.: A three-dimensional visualization system for movements of multiple dipoles which are estimated from

magnetoencephalography. Abstracts of the 6th International Congress of the International Society for Brain Electromagnetic Topography (ISBET), 31, 1995.

Sakata, T., Kubota, N., Yoyekawa, H., Imaizumi, S. and Niimi, S.: GRBAS evaluation of running speech and sustained phonation. Proceedings of the XXIII World Congress of the International Association of Logopedics and Phoniatrics, Cairo 1995, 33-36, 1995.

Shimura Y. and Imaizumi, S.: Emotional information in young infants vocalization. in Proceedings of the 8th International Congress of Phonetic Sciences, Stockholm, 412-415, 1995.

B. Publications in Japanese

B. 1. Publications in Periodicals

B. 1. i. Original Contributions

Hiramatsu, K., Fukuda, M., Itoh, K., Yumoto, M., Niwa, S. and Matsushita, M.: MEG study of N400 component in semantic processing.(磁場によるN400発生源の検討) Clinical Electroencephalography (臨床脳波), 37: 293-297, 1995.

The endogeneous cognitive components of event-related potentials (ERPs) have been useful measures for language study. One of such components, the N400 has been reported to sensitive to semantic variation. However, it has been unclear where the location of the N400 generator. We recorded evoked magnetic fields using 37 channel magnetic source imager system (Bti).during auditory N400 paradigm of paired-words. Both dipoles of the N400 magnetic fields for unrelated and nonsense words were assessed in the medial temporal lobe by one-dipole model. The first dipoles for both words were assessed also in the medial temporal lobe by two-dipole model. However, the second dipoles for unrelated and nonsense were different.

Shimura, Y. and Imaizumi, S.: Emotional information in vocalization of young infants. (生後2カ月の乳児の音声における非言語情報) Jpn. J. Logop. and Phoniatr. (音声言語医学) , 36: 365-371, 1995.

The developmental aspects of four infants' ability to express emotions through vocalizations were studied based on perceptual rating experiments involving nine vocalization- and emotion-related reference words. Perceptual rating scores for 200 voice samples recorded from four infants at 2 months of age were compared to those for 517 voice

samples recorded from six infants at 6, 9, 12 and 17 months of age. Three factors representing emotional contrast-between crying/frightened/sad and laughing/pleased/happy; between shouting/surprised and whispering/calm; and between speaking and singing - were extracted by factor analysis. Even at 2 months of age, there were significant individual differences in the extracted factor scores, although there was less variability compared to the scores obtained from the elder infants. These results may indicate that infants even at 2 months of age can express some emotional contrast through vocalization.

B. 1. ii. Review Articles

Imaizumi, S.: Pathological voice quality. (病的音声の声質) J. Acoust. Soc. Jpn. (日本音響学会誌), 51: 887-892, 1995.

Kiritani, S.: (声帯振動の超高速度撮影) Otologia Fukuoka (耳鼻と臨床), 41: 675-680, 1995.

B. 1. iii. Contributions in Separate Publications

none.

B. 1. iv. Translation

none.

B. 1. v. Progress Report

none.

B. 2. Contributions in Meeting, Proceedings etc.

伊藤憲治, 越田一郎, 平松謙一, 福田正人, 中込和幸, 畑哲信, 丹羽真一: 対話と思考過程における脳内律動情報処理機構のモデル. 1996年電子情報通信学会総合大会講演論文集, 1: 514-515, 1996.

今泉敏: 概念・言語獲得及びその障害者に対する人工現実による訓練体系の研究、

電子情報通信学会技術研究報告, HC95-29: 23-30, 1996.

今泉敏, 千葉祐子, 林安紀子, 出口利定: 対話音声の時間構造調節の解析. 日本音響学会講演論文集 (平成7年度春季), 235-236, 1995.

今泉敏, 林安紀子: 日本語母音無声化の状況依存性. 日本音声学全国大会予稿集, 80-85, 1995.

今泉敏, 森浩一, 桐谷滋, 湯本真人: 聴覚的情景分析の脳内過程—脳磁図による検討—. 電子情報通信学会信学技報 SP94-108 及び日本音響学会聴覚研究会資料, H-95-18: 1-8, 1995.

今泉敏, 森浩一, 桐谷滋, 湯本真人: 脳磁図によるカクテルパーティ効果の脳内過程観測. *Audiology Japan*, 38: 747-748, 1995.

今泉敏, 森浩一, 桐谷滋, 湯本真人: 脳磁図による重畳音響事象の知覚過程の解析. 日本生体磁気学会, 8: 200-203, 1995.

今泉敏, 森浩一, 桐谷滋, 湯本真人: 重畳音の脳内表現. 日本音響学会講演論文集 (平成7年秋季), 371-372, 1995.

今泉敏, 森浩一, 桐谷滋, 湯本真人: 重畳音の脳内表現—脳磁図による検討—. 日本音響学会聴覚研究会資料, H-95-66: 1-8, 1995.

今泉敏, 森浩一, 世木秀明, 八巻弘二, 桐谷滋, 湯本真人: McGurk効果の脳内過程. 日本音響学会講演論文集 (平成8年春季), 463-464, 1996.

今川博, 桐谷滋, 新美成二: 声帯振動デジタル撮影装置の高速高解像度化. 日本音響学会講演論文集 (平成8年春季), 325-326, 1996.

今川博, 桐谷滋, 新美成二, 宮地麻美子, 熊田政信: 高速解像度声帯振動デジタル撮影装置の応用. 日本音声言語医学会予稿集, 72, 1995.

桐谷滋, 今川博, 宮地麻美子, 新美成二: 病的音声における声帯振動の準周期的変動. 御日本音声言語医学会予稿集, 140, 1995.

越田一郎, 伊藤憲治, 吉田健一, 畑哲信, 宮内勝, 平松謙一: 分裂病の対話分析に基づく思考過程のモデル化. 1996年電子情報通信学会総合大会講演論文集, 1: 516-517, 1996.

志村洋子, 坂和真由美, 今泉敏: 2カ月児音声における感性情報—成人による認知特性と音響特性—. 電子情報通信学会信学技報 SP94-110 及び日本音響学会聴覚研究会資料, H-95-20: 17-24, 1995.

須藤路子, 岡田光弘, 西山佑司, 桐谷滋: 諸状況における終助詞「か」の意味解釈と音響特性. 日本音響学会講演論文集 (平成7年秋季), 323-324, 1995.

為川雄二, 出口利定, 林安紀子, 桐谷滋: 生後10カ月齢乳児における語彙獲得について—選考振り向き法を用いた実験的検討—. 日本音声言語医学会予稿集, 126, 1995.

鄭恩禎, 桐谷滋: 日本語の有声—無声の弁別にピッチパターンが与える影響—韓国語母語話者を中心に—. 日本音響学会講演論文集 (平成8年春季), 45-346, 1996.

畑哲信, 福田正人, 平松謙一, 中込和幸, 伊藤憲治, 岩波明: 精神病患者における思考障害評価. 1995年電子情報通信学会基礎・境界ソサイエティ大会講演論文集, 1: 223-224, 1995.

林安紀子, 為川雄二, 出口利定, 桐谷滋: 生後6ヶ月齢及び10ヶ月齢児における日本語節境界の知覚. 日本音響学会講演論文集 (平成7年秋季), 385-386, 1995.

平松謙一, 福田正人, 畑哲信, 松下正明, 湯本真人, 伊藤憲治, 斉藤治: ダブル課題を用いた事象関連磁場による2種類のP300成分の発生源の検討. 脳波と筋電図, 23: 200, 1995.

藤本雅子, 桐谷滋: C V J V音連続を含む語における促音化の音響分析的研究. 日本音響学会講演論文集 (平成7年秋季), 303-304, 1995.

船津誠也, 藤沼貴, 今泉敏, 桐谷滋: 日本人およびロシア人の摩擦子音の識別と音響的特性. 電子情報通信学会信学技報 SP94-99 及び日本音響学会聴覚研究会資料 H-95-9: 9-14, 1995.

皆川泰代, 桐谷滋: 外国人による日本語長母音・短母音識別における母語の韻律特徴の影響. 日本音響学会講演論文集 (平成8年春季), 385-386, 1996.

渡辺陽子, 桐谷滋, 世木秀明: 運動障害性構音障害の構音の評価 (第2報)—ピッチ周期に同期した分析—. 日本音声言語医学会予稿集, 192, 1995.

Department of Speech Physiology

A. Publications in English

A. 1. Publications in Periodicals

A. 1. i. Original Contributions

none.

A. 1. ii. Review Articles

none.

A. 1. iii. Contributions in Separate Publications

none.

A. 1. iv. Translations

none.

A. 1. v. Progress Report

Kiritani, S., Imagawa, H., Kumada, M. and Niimi, S.: Quasi-periodic perturbations in pathological vocal fold vibration. *Ann. Bull. RILP*, 29: 27-33, 1995.

Niimi, S. and Naito, A.: Larygeal gestures during airtrapping. *Ann. Bull. RILP*, 29: 35-41, 1995.

A. 2. Contributions in Meeting, Proceedings etc.

Beckman, M. E., Erickson, D., Honda, K., Hirai, H. and Niimi, S.: Physiological correlates of global and local pitch range variation in the production of high tones in English. *Proceedings*

ICPhS 95, Stockholm, Sweden, Vol.2: 638-641, 1995.

Hosako-Naito, Y., Tayama, N., Iwamoto, Y. and Niimi, S.: Unusual finding of vocal fold in autoimmune disease: bamboo node like lesion. Proceedings of the XXIII World Congress of the IALP, Cairo, Egypt, 14-17, 1995.

Imaizumi, S., Mori, K., Kiritani, S. and Yumoto, M.: Observation of neural processes of auditory scene analysis by magnetoencephalography. In Processing in Auditory and Language Cortex (IBRO Satellite Symposium), 35, Sapporo, 1995.

Imaizumi, S., Mori, K., Kiritani, S. and Yumoto, M.: Neural representation of concurrent sound objects. Abstracts for The Tenth Tokyo Institute of Psychiatry International Symposium: Visualization of Information Processing in the Human Brain: Recent Advances in MEG and Functional MRI, 117, Tokyo, 1995.

Mori, K., Ito, K. and Iwasaki, S.: A dynamic programming matching method to classify budgerigar contact calls mimics the birds' behavioral discrimination. In The Association for Research in Otolaryngology 18th Midwinter Research Meeting, p. 67, St. Petersburg Beach, Florida, U.S.A. Association for Research in Otolaryngology, 1995.

Mori, K., Imaizumi, S., Kiritani, S. and Yumoto, M.: Possible correlation of evoked brain magnetic fields to auditory short-term memory of phoneme and pitch contrasts. Japanese Journal of Physiology, 45(S1): S162, 1995.

Mori, K., Imaizumi, S., Kiritani, S. and Yumoto, M.: Neuromagnetic field responses to changes of interaural time difference in the human auditory cortex. 25th Annual Meeting Society for Neuroscience Abstracts, 21(2): 1180, 1995.

Naito, A., Niimi, S. and Kumada, M.: Airtrapping as a function of the larynx. Proceedings of the XXIII World Congress of the IALP, Cairo, Egypt, 1-4, 1995.

Sakata, T., Kubota, N., Yonekawa, H., Imaizumi, S. and Niimi, S.: GRBAS evaluation of running speech and sustained phonation. Proceedings of the XXIII World Congress of the IALP, Cairo, Egypt, 33-36, 1995.

Sakata, T., Kubota, N., Yonekawa, H., Imaizumi, S. and Niimi, S.: GRBAS evaluation of running speech and sustained phonation. Folia Phoniatr. 47:101, 1995.

B. Publications in Japanese

B. 1. Publications in Periodicals

B. 1. i. Original Contributions

Saigusa, H., Ookubo K., Niimi, S. and Yagi, T.: A case of associated laryngeal paralysis with contra-lateral optic nerve disturbance. (対側視神経障害を伴った混合性喉頭麻痺の一例) *Larynx* (喉頭), 143-147, 1995.

A 43 year old man was complaining of left central visual field deficit, hoarseness in breathing, dysphagia and right shoulder pain after an acute infection of the upper airway. Physical examination revealed right associated laryngeal paralysis and left optic neuritis. Laboratory examination showed high parainfluenza type 3 virus-antibody titers, suggesting meningitis caused by the said virus. For treatment, prednisolone was administered starting with 80mg, resulting in improvement of clinical symptoms.

B. 1. ii. Review Articles

Mori, K.: Sound localization and the brain of the owl (フクロウの音源定位と脳). *Iden* (遺伝), 49: 35-41, 1995.

Niimi, S.: Vocal rehabilitation for laryngectomees.(喉頭摘出者の発声治療) *Clinical Neuroscience* 13: 214-216, 1995.

B. 1. iii. Contributions in Separate Publications

none.

B. 1. iv. Translation

none.

B. 1. v. Progress Report

Niimi, S., Imaizumi, S., Sakata, T., Hirose, H. and Yamaguchi, H.: A study of treatments and

their efficacy for voice disorders in smokers. (喫煙者における音声障害の治療とその効果に関する研究.) Smoking research foundation annual research report.(喫煙科学研究財団研究年報), 958-967, 1995.

B. 2. Contributions in Meeting, Proceedings etc.

石毛美代子, 新美成二, 阿部雅子: 機能性構音障害の一例. 第40回日本音声言語医学会学術講演会予稿集, 180, 1995.

今泉敏, 森浩一, 桐谷滋, 湯本真人: 聴覚的情景分析の脳内過程: 脳磁図による検討. 電子情報通信学会技術報告, SP94-108: 1-8, 1995.

今泉敏, 森浩一, 桐谷滋, 湯本真人: 重複音の脳内表現 - 脳磁図による検討 -. 聴覚研究会資料, H-95-66: 1-8, 1995.

今泉敏, 森浩一, 桐谷滋, 湯本真人: 脳磁図によるカクテルパーティ効果の脳内過程観測. *Audiology Japan*. 38: 747-748, 1995.

今泉敏, 森浩一, 桐谷滋, 湯本真人: 重疊音の脳内表現. 日本音響学会講演論文集 (平成7年度秋季), 371-372, 1995.

岩本容武, 丹生健一, 新美成二: 舌癌術後症例の会話能力の評価. 第40回日本音声言語医学会学術講演会予稿集, 199, 1995.

大島清史, 新美成二: 日本語発話時の舌運動様式: 第40回日本音声言語医学会学術講演会予稿集, 172, 1995.

桐谷滋, 今川博, 宮地麻美子, 新美成二: 病的音声における声帯振動の準周期的変動, 第40回日本音声言語医学会学術講演会予稿集, 140, 1995.

熊田政信, 新美成二, 新津守: 母音構音時の舌関連筋の機能. 信学技報, SP94-98, 1995.

三枝英人, 熊田政信, 岩本容武, 新美成二, 八木聡明: 構音動作に於けるオトガイ舌筋活動の体位との相関. 第40回日本音声言語医学会学術講演会予稿集, 177, 1995.

三枝英人, 潮建司朗, 国友万由美, 新美成二, 八木聡明: 鼻咽腔閉鎖不全に対する軟口蓋固定の応用. 第47回日本気管食道科学会総開予稿集, 90, 1995.

坂田知子, 石毛美代子, 今泉敏, 新美成二: 歌声における感情表現について. 第40

回日本音声言語医学会学術講演会予稿集, 141, 1995.

坂田知子, 久保田七美, 米川紘子, 今泉敏, 新美成二: 朗読音声における GRBAS 評価の検討. 音声言語医学, 36: 146, 1995.

手塚克彦, 三富夏彦, 横山正人, 田山二郎, 新美成二: 造影剤誤嚥の気道及び肺胞刺激性に関する基礎的研究. 第 47 回日本気管食道科学会総会予稿集, 111, 1995.

新美成二, 浅野尚, 大島弘至, 神田敬, 田中美郷, 林宏典, 吉田義一: 小学校普通学級における言語障害の実態. 第 96 回日本耳鼻咽喉科学会総会予稿集, 158, 1995.

藤森里香子, 市川銀一郎, 坂田知子, 今泉敏, 新美成二: いわゆる本態性音声振線症の音声所見について. 音声言語医学, 36: 133, 1995.

松永敦, 久保武, 嶋良仁, 新美成二: 竹節様ポリープの一症例. 第 40 回日本音声言語医学会学術講演会予稿集, 157, 1995.

三富夏彦, 手塚克彦, 横山正人, 田山二郎, 新美成二: 造影剤の粘性変化による嚥下動態の差異. 第 47 回日本気管食道科学会総会予稿集, 110, 1995.

宮地麻美子, 小田恂, 宝迫雪, 熊田政信, 今川博, 桐谷滋, 新美成二: いわゆる竹節状声帯にみられた特異な振動パターン. 第 96 回日本耳鼻咽喉科学会総会予稿集, 142, 1995.

村野恵美, 福田宏之, 新美成二: ブラジルのポルトガル語の鼻母音について. 第 40 回日本音声言語医学会学術講演会予稿集, 176, 1995.

森浩一, 今泉敏, 桐谷滋, 湯本真人: 音源定位に関連する脳磁図誘発反応について. 第 25 回日本聴覚医学会 ERA 研究会, 1-2, 東京, 1995.

山口宏也, 井上斉, 世木秀明, 廣瀬 肇, 坂田知子, 今泉敏: 喉頭ポリープ術前・術後の発声機能の検討. 音声言語医学, 36: 137-138, 1995.

米川紘子, 山口宏也, 石毛美代子, 坂田知子, 今泉敏, 新美成二: ラインケ浮腫患者音声の音響分析による検討-病型分類との関連において-. 音声言語医学, 36: 136-137, 1995.

Department of Cognitive Neuroscience

A. Publications in English

A. 1. Publications in periodicals

A. 1. i. Original Contributions

Nishiyama, K., Momose, T., Sugishita, M., and Sakuta, M.: Positron emission tomography of reversible intellectual impairment induced by long-term anticholinergic therapy. *J. Neurol. Sci.*, 132: 89-92, 1995.

Long-term oral anticholinergic (AC) therapy can occasionally produce intellectual impairment. We investigated a patient with Parkinson's disease accompanied by intellectual impairment induced by long-term AC therapy. The intellectual impairment of the patient disappeared after cessation of AC therapy. Positron emission tomography (PET), during and after long-term oral AC therapy, revealed that it causes bilateral diffuse decrease of glucose metabolism in the cortex, basal ganglia, thalamus, hippocampus and cerebellum. Cessation of the therapy resulted in diffuse increase of glucose metabolism in all of the above regions. Cranial CT and magnetic resonance imaging (MRI) showed no abnormalities. Our results suggest that long-term AC therapy causes reversible bilateral diffuse glucose hypometabolism.

Seki, K., Yajima, M., and Sugishita, M. : The efficacy of kinesthetic reading treatment for pure alexia. *Neuropsychologia*, 33:595-609,1995.

This paper presents an effective treatment for pure alexia by a type of single-case design, which we termed a "material-control single-case design" [Sugishita et al., *Neuropsychologia*, Vol. 31, 559-569, 1993]. Two patients with pure alexia were treated using kinesthetic reading (reading by tracing or copying the outline of each letter with the patient's finger). The results clearly demonstrated that both patients significantly improved their reading and copying performances. Their recovery of reading performance arose from improvement in copying. The results of tachistoscopic reading tests suggested that the patient obtained the ability to read without kinesthetic movements.

Sodeyama, N., Tamaki, M., Sugishita, M.: Persistent pure verbal amnesia and transient

aphasia after left thalamic infarction. *J. Neurol.*, 242:289-294,1995.

A 57-year-old right-handed man suffered persistent pure verbal amnesia (PPVA) and transient aphasia after left thalamic infarction. A neuroanatomical study with magnetic resonance imaging to identify the site of the lesion showed destruction of the internal medullary lamina (IML), mammillothalamic tract (MTT), the ventrolateral nucleus (VL) and the lower one-third of the medial nucleus. As regions critical for PPVA are unknown, we reviewed the cases of PPVA after left thalamic infarction reported in the literature. These suggest that confined destruction of the IML, MTT and VL in the left thalamus can produce PPVA.

Sugishita, M., Otomo, K., Yamazaki, K., Shimizu, H., Yoshioka, M., and Shinohara, A. : Dichotic listening in patients with parietal section of the corpus callosum. *Brain*, 118: 417-427,1995.

Patients with a complete section of the corpus callosum have been observed to exhibit strong left-ear suppression when different speech stimuli are presented to both ears simultaneously (so-called dichotic listening). Data concerning the locus of corpus callosum damage that causes strong left-ear suppression remains scanty. In the present investigation, a consonant-vowel syllable dichotic listening test was given to five right-handed patients with partial sections of the corpus callosum, which were located using MRI and accurately defined measurement procedures. The following two measurement methods were used: (i) the genu-splenium (G-S) method, in which a lesion was localized in the anteroposterior dimension relative to the total length of the corpus callosum, defined as the distance between the most anterior point of the genu to the most posterior point of the splenium; and (ii) the rostrum-splenium (R-S) method, which takes into account the curvature of the corpus callosum, and in which a lesion was localized relative to the total length of the corpus callosum, defined as the length of the curved line from the tip of the rostrum to the end of the splenium. Results were compared with scores from 50 normal control subjects. Strong left-ear suppression was observed in two patients, who had surgical sections of the posterior 15.5-18.5% of the corpus callosum as measured with the G-S method, or the posterior 20-24% of the corpus callosum as measured with the R-S method. The suppression phenomenon persisted for more than 10 years post-surgery. On the other hand, the remaining three patients, who had lesions anterior to the posterior 17-28% of the corpus callosum as measured with the G-S method or 20-33% as measured with the R-S method exhibited no left-ear extinction. Despite the common

assumption that damage to the posterior part of the trunk of the corpus callosum causes strong left-ear suppression, the results from the G-S method indicated that damage to the splenium defined as the posterior one-fifth of the segment between the anterior-most and posterior-most points of the corpus callosum, cause strong left-ear suppression. By the R-S method, results showed that damage to the splenium (the posterior one-fifth of the curvature of the corpus callosum) and possibly the part extending to the most posterior part of the trunk (the posterior one-quarter of the curvature) causes strong left-ear suppression. By the R-S method, results showed that damage to the splenium (the posterior one-fifth of the curvature of the corpus callosum) and possibly the part extending to the most posterior part of the trunk (the posterior one-quarter of the curvature) causes strong left-ear suppression.

Takayama, Y., Sugishita, M., Fukuyama, H., and Akiguchi, I.: Localization in spatial vision. *Clin. Neurol. Neurosurg.*, 97: 249-252, 1995.

The present study provides clear clinico-anatomical evidence for localization of the spatial vision pathway. We report the case of a 29-year-old woman with severe spatial vision impairment. Magnetic resonance imaging revealed distinct bilateral and symmetrical occipito-parietal damage. The right lesion affected the superior parietal lobule, the dorsolateral portion of the occipital lobe, the precuneus, and the cuneus. The left lesion affected the superior parietal lobule, the dorsolateral portion of the occipital lobe, the precuneus, an upper part of the cuneus, and the posterior portion of the middle and inferior temporal gyri.

Takeda, K., and Sugishita, M. : Word length error types in Japanese left-sided neglect dyslexia. *Clin. Neurol. Neurosurg.*, 97: 125-130, 1995.

Seven patients who showed left-sided neglect in reading single words were examined. Neglect errors typically involved omission of initial letters in our patients. Two patients with enough errors had a tendency that longer words were more susceptible to errors than short words. Most of the patients were less affected than the patients in the previous reports. Japanese people read strings of letters written not only from left to right but also from right to left. The seven patients continued to misread the letters on the left end when asked to read words from right to left. The two patients showed a significant deficit in reading words from left to right compared to reading from right to left.

A. 1. ii. Review Articles

none.

A. 1. iii. Contributions in Separate Publications

none.

A. 1. iv. Translations

none.

A. 1. v. Progress Report

none.

A. 2. Contributions in Meeting, Proceedings etc.

Koo Mi, Lee., Takayama, Y., and Sugishita, M. : A case of report ; pure agraphia of kanji. The 10th Naga Memorial Symposium. Beppu, Japan. August 1995.

Sugishita, M., Takayama, Y., Sekimoto, S., Shino, T., Yoshikawa, H., and Takahashi, Y.: Functional magnetic resonance imaging of the intraparietal sulcus during internal writing. The 10th Naga Memorial Symposium. Beppu, Japan. August 1995.

Sugishita, M., Koike, A., Ikemori, R., Shimizu, H., Suzuki, I., and Ishijima, B.: Lack of memory disturbance after right temporal lobectomy. Functions and clinical relevance of the hippocampus. The Satellite symposium of 4th IBRO World Congress of Neuroscience. Kyoto, Japan. July 15th-16th, 1995.

Takayama, Y., and Sugishita, M.: Impaired prosody and brain damage. JRDC Forum for Multi-Disciplinary Researches. Dialogue between Cognitive Science and Neuroscience. Sapporo. May, 1995.

Takayama, Y., Akiguchi, I., Sugishita, M., Ino, T., Hirose, S., and Seriu, N. : Neuroanatomy of amnesia due to unilateral posterior cerebral infarction -MRI study-. Functions and clinical relevance of the hippocampus. The Satellite symposium of 4th IBRO World Congress of Neuroscience. Kyoto, Japan. July 15th-16th, 1995.

Takayama, Y., and Sugishita, M.: Selective impairment of auditory-verbal short-term memory due to a lesion in the left auditory association cortex. The 10th Nagae Memorial Symposium. Beppu, Japan. August 1995.

B. Publications in Japanese

B. 1. Publications in Periodicals

B. 1. i. Original Contributions

none.

B. 1. ii. Review Articles

Sugishita, M.: Aphasia. (失語症) J. Cli. Rehabil. Extra, 38-43, 1995.

Sugishita, M., and Takayama, Y.: Transcranial magnetic stimulation in visual neuroscience. (磁気刺激による視覚性認知へのアプローチ) Adv. Neurol. Sci. (神経研究の進歩) 39: 656-661, 1995.

Sugishita, M.: Recent advances in studies of memory disturbances. (記憶障害に関する最近の知見) Pathophysiology (病態生理), 14: 1046-1052, 1995.

Takayama, Y.: Agnosia. (失認症) J. Cli. Rehabil. Extra, 44-49, 1995.

B. 1. iii. Contributions in Separate Publications

Sugishita, M. and Yamazaki, K.: Japanese Edition of Raven's Coloured Progressive Matrices (日本語版レーブン色彩マトリックス検査) In: Matubara, T. ed. new Introduction of recent psychological testing (最新心理テスト法入門) Nihon Bunka Kagakusya, 64-65,

1995.

Sugishita, M. and Yamazaki, K.: The Western Aphasia Battery. Japanese Edition (WAB 失語症検査日本語版) In: Matubara, T. ed. Introduction of recent psychological test (最新心理テスト法入門) Nihon Bunka Kagakusha: 292-293, 1995.

Sugishita, M.: Theory of consciousness based on somatosensory illusion caused by electrical stimulation of brain (体性感覚からの意識論-脳の電気刺激と意識-) In Miyashita, H., and Shimojyo, N. eds. Brain to Mind (脳から心へ-高次機能の解明に挑む-) Iwanami shoten: 154-158, 1995.

Sugishita, M.: Diagnosis of Aphasia.(失語症の診断) In Arima, M., and Kaga, M. eds. Advances in Developmental Disorder Medicine 5. (発達障害医学の進歩 5) Sindan to Chiryō sya: 71-76. 1995.

Takayama, Y., and Akiguchi, I. : Borderzone infarction. (境界領域梗塞) In Tagawa, K. and Hirayama, K. eds. Stroke and Neuropsychology. (脳卒中と神経心理学), Igaku shoin: 108-112, 1995.

Takayama, Y. : Acalculia. (失計算) In Tagawa, K. and Hirayama, K. eds. Stroke and Neuropsychology. (脳卒中と神経心理学), Igaku shoin. 335-338, 1995.

B. 1. iv. Translation

Sugushita, M. ed.: Clinical Neuropsychology (臨床神経心理学), Asakura Shoten, 1995.:
Heilman, K., and Valenstein, E. eds.: Clinical Neuropsychology.3rd ed. Oxford Univ. Press. 1993.

B. 1. v. Progress Report

none.

B. 2. Contributions in Meeting, Proceedings etc.

阿部晶子, 平林順子, 市川英彦, 遠藤邦彦, 柳 治雄, 杉下守弘: 左側頭頂葉損傷患者で認められる聴覚的リズム認知障害について. (第 19 回 日本失語症学会 1995.11)

遠藤邦彦, 阿部晶子, 平林順子, 柳 治雄, 市川英彦, 杉下守弘, 柳澤信夫: 失語症患者で認められた非言語音の認知障害について. (第 19 回 日本失語症学会 1995.11)

広実真弓, 杉下守弘, 藤本 彰: initial cue を与える呼称訓練の訓練効果について. (第 19 回 日本神経心理学会 1995.9)

小池 敦, 杉下守弘: 右側頭葉前部切除後の記憶障害について.(第 19 回 日本神経心理学会 1995.9)

栗崎博司, 杉下守弘: L-DOPS により生じた相貌失認と考えられた症状の記憶との関連.(第 19 回 日本神経心理学会 1995.9)

三田村啓子, 高山吉弘, 秋口一郎: 失語症患者の純音聴力と語音聴力の検討. (第 19 回 日本失語症学会 1995.11)

岡崎晶子, 杉下守弘: 純粋失読における刺激等価性について. (第 19 回 日本神経心理学会 1995.9)

李 久美, 杉下守弘, 武田克彦: 左側頭葉後部病変による漢字の純粋失書. (第 19 回 日本神経心理学会 1995.9)

李 久美, 杉下守弘, 高山吉弘: 右半球病変で生じたと考えられる連合性視覚失認の一例. (第 19 回 日本失語症学会 1995.11)

杉下守弘, 高山吉弘, 鈴木一郎, 清水弘之, 石島武一: 連続磁気刺激による言語優位半球の決定.(第 36 回 日本神経学会総会 1995.5) 臨床神経学 36:135, 1996.

杉下守弘: 分離脳患者にみられる視覚性の Extinction と無視について.(第 19 回 日本神経心理学会 1995.9)

杉下守弘, 小池 敦, 清水弘之, 鈴木一郎, 石島武一: 左側頭葉前部切除例と言語性記憶障害の有無 (第 29 回 日本てんかん学会 1995.10)

杉下守弘, 高山吉弘, 関本荘太郎, 塩野孝博, 吉川宏起: functional MRI による脳内書字機能の研究. (第 19 回 日本失語症学会総会 1995.11)

杉下守弘: 機能的脳賦活法の研究における戦略. (第 1 回 ポジトロン医学会, 1996.1)

杉下守弘, 大伴 潔, 清水弘之: 難治性小児てんかん例に対する脳梁離断術の効果-【生活能力質問紙】を用いた術前・術後の比較- (厚生省 精神・神経疾患研究委託費 重症心身障害児の病態・長期予後と機能改善に関する研究 平成 7 年度研究班会議 1996.3) 報告書 211-218

高山吉弘, 杉下守弘, 鈴木一郎, 清水弘之, 石島武一: 連続磁気刺激による一時感覚野における時間分解能の検討. (第 36 回 日本神経学会総会.1995.5) 臨床神経学 36: 216, 1996.

高山吉弘: ジェスチャの意味が分かっていた左頭頂葉梗塞による観念運動失行の一例. (第 5 回京都神経心理研究会 1995.7)

高山吉弘, 杉下守弘, 秋口一郎: 視床枕と立体視障害.(第 19 回 日本神経心理学会 1995.9)

米田孝一, 高山吉弘, 杉下守弘: 視覚刺激呈示後に視覚領で反応が出るまでの時間-脳磁図を用いた研究-(第 19 回 日本神経心理学会 1995.9)

Progress Reports