

침치료만으로 경과 관찰한 미세 갑상선 유두암 증례보고

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Abstract

Observation of Papillary Thyroid Microcarcinoma Patient Treated with Acupuncture Alone

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Objectives : Thyroid cancer is one of the most common and rapid increases of malignancy worldwide. It is the aim of the present a case of papillary thyroid microcarcinoma (PTMC) treated with acupuncture alone to derive further studies of the determination of treatment options for PTMC, such as surgery, acupuncture and observation alone, etc.

Method : A 51-year-old woman with malignancy of thyroid nodule (0.89×0.59 cm) was referred to our hospital on January 2010. We applied to the acupuncture alone three times weekly by the patient's decision from January 2010 to November 2014. Blood tests were conducted three times during the treatment period and ultrasonography was performed every 6 months.

Results : Both laboratory data and tumor size results showed no deteriorations as compared with those of initial examination. The patients has been survived in healthy state without any metastasis or disease progression on November, 2014.

Conclusion : This case presents a possibility that acupuncture or observation alone can be provided as an option in the treatment means for patients with PTMC. Further study will need to study more longer follow-up and a large number of patients for PTMC using acupuncture or observation alone.

Key words : Thyroid cancer, Papillary thyroid microcarcinoma, Acupuncture

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Introduction

Thyroid cancer is the most common malignancy and it has recently become rapid increases in the world. As development of medical technology in recent days, it is possible to diagnose th thyroid cancer such as the small tumors via ultrasound detection and fine needle aspiration biopsy (FNAB)¹⁻²⁾.

The main reasons of thyroid cancer are genetic predisposition as well as environmental factors including excessive intake of iodine, diet habits, and radioactive exposure³⁻⁵⁾. Nevertheless it is difficult to escape the social debate, early screening and surgical treatment in the papillary thyroid microcarcinoma (PTMC) is no benefits to patients with thyroid cancer⁶⁾.

Korean Thyroid Association (KTA) created revised guidelines for patients with thyroid nodules and thyroid cancer in 2010. The most important foci of revision is recommended that the thyroid nodules size are needed practical evaluation with FNAB. They recommend that the size of the nodule in the high risk groups of thyroid cancer performed FNAB is greater than 0.5 cm⁷⁾, however, some controversy still exists regarding its optimal guidelines⁸⁾.

In this study, we present to report a case of non-surgical PTMC patient who treated with acupuncture alone. Moreover, in order to induce the further more studies which are study for the simple observation or effect of acupuncture treatment on the PTMC.

Case Report

A 51-year-old woman with chronic fatigue and

anorexia was referred to our hospital on January 2010. Three month ago, suspicious malignancy of thyroid nodule (0.89 × 0.59 cm) was diagnosed in ultrasound detection of local clinic. The patient was carried to next step examination such as FNAB and positron emission tomography - computed tomography (PET-CT) scan. As a result, the patient was finally diagnosed with single PTMC of right lobe without lymphadenopathy and distant metastasis. All other blood parameters of laboratory tests were in normal range.

The doctor recommended to immediate surgery, but she hesitated owing to her strenuous memory about adverse reaction of various medicines. Thus, the patient worried about the fact that she will be needed to take thyroid hormone for lifelong after surgery. The patient was eventually abandoned surgery, and she decided to receive acupuncture for preventing PTMC progress instead of surgery.

We didn't serve herbal medicine owing to her fear of medication, thus decided to apply acupuncture alone three times weekly (20 min per performance). We choose the acupoints depend on the symptoms as well as by referred Sang-Su theory which is according to the Asian Image-Mathematics System based on Hado and Lakso⁹⁻¹⁰⁾.

The acupoints were summarized as follows : LU-6 (Kongzui), LU-10 (Yujji), LU-11(Shaoshang), LI-2 (Erjian), LI-5 (Yangxi), LI-6 (Pianli), ST-36 (Zusanli), ST-45 (Lidui), SP-3 (Taibai), SP-4 (Gongsun), SP-8 (Diji), HE-3 (Shaohai), HE-4 (Lingdao), HE-5 (Tongli), HE-6 (Yinxi), HE-7 (Shenmen), SI-1 (Shaoze), SI-5 (Yanggu), SI-7 (Zhizheng), BL-58 (Feiyang), BL-63 (Jinmen), BL-64 (Jinggu), KI-3 (Taixi), KI-4 (Dazhong),

Table 1. Changes of Blood Chemistry Findings in Patient

Item	Test	Unit	Reference Range		2011 0704	2012 0910	2013 0318
			(From)	(To)			
1	T3	ng/dl	75.7	176.7	90.3	99.6	106.5
2	T4	ug/dl	5.4	12.22	6.37	7.25	6.60
3	TSH	uIU/ml	0.27	4.2	2.79	1.89	1.36
4	Free T4	ng/dl	0.93	1.7		1.20	1.23
5	AST	IU/L	0	40	16	17	18
6	ALT	IU/L	0	40	11	12	12
7	ALP	IU/L	30	120	123	107	121
8	γ -GTP	IU/L	0	64	13	12	14
9	Creatinine	mg/dl	0.4	1.5	0.7	0.7	0.6
10	BUN	mg/dl	5	24	12.8	10.0	11.3
11	WBC	102/ μ l	45	110	39	41	44
12	RBC	104/ μ l	400	600	413	413	412
13	Hemoglobin	g/dl	12	16	13.4	13.2	13.1
14	Platelet	104/ μ l	15	45	17.8	16.5	18.9

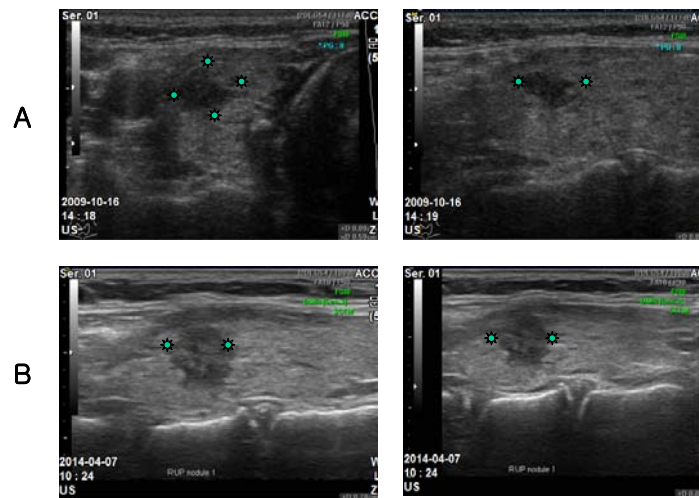


Fig. 1. Sonographic Findings

Thyroid nodule was observed in the right lobe of thyroid.

A was taken on September 2009 and B was examined on April 2011. There was no interval change in tumor size and shape in the two figures.

KI-5 (Shuiquan), KI-6 (Zhaohai), KI-10 (Yingu),
PC-4 (Ximen), PC-7 (Daling), TE-5 (Waiguan),
TE-7 (Huizong), GB-36 (Waiqiu), GB-37
(Guangming), GB-40 (Qiuxu), LR-1 (Dadun),

LR-3 (Taichong), LR-5 (Ligou), LR-6 (Zhongdu),
LR-7 (Xiguan). The acupuncture was done at
the above mentioned acupoints. Sterile
acupuncture needles (Zeus Korea Acupuncture

Dev. Co., diameter 0.20 length 30 mm) were inserted to a depth of 1.5 cm.

The patient visited our hospital from January 2010 to November 2014. Blood tests were conducted three times during the period and ultrasonography was performed every 6 months. There was no adverse events during the hospitalized period. Her subjective symptoms were rapidly relieved and laboratory data showed no deteriorations as compared with that of initial examination (Table 1.). The size of the tumor (0.75 × 0.59 cm) which was detected by ultrasonography on the November 2014 also did not change as compared with the initial time. The presented data in Figure 1 was examined at April 2011, because we could not obtain data from the test was done in other hospital.

The patient has been living in healthy status without any metastasis or disease progression on November, 2014.

Discussion

Tumor size is regarded as an important prognostic factor for evaluation of thyroid cancer. Extra thyroidal invasion, rates of multi-focality, bilaterality, lymph node invasion, and distant metastasis are closely correlated with the size of tumors¹¹. At the point of views investigators, however the correlation between tumor size and disease progress in the PTMC is controversial.

PTMC is defined as papillary carcinoma of the thyroid and it is less than 10 mm in diameter¹². PTMC is divided into two of subgroups: tiny carcinoma (> 0.5 cm) and minute carcinoma (≤ 0.5 cm)¹³. Wada et al. performed the comparing study for the lymph node invasion between

minute carcinoma and tiny carcinoma of PTMC had lower frequency of overall node invasion (55.7% vs. 73.7%, $p < 0.05$), central node invasion (50.8% vs. 68.2%, $p < 0.05$)¹⁴. Ito et al. reported that the cervical lymph node invasion or rates of extra thyroidal extension tended to be increased when tumor size is exceeded than 0.7 cm¹⁵. Moreover, pervious study showed that the tumor aggressiveness is closely correlated to tumor size, such as multi-focality, bilaterality, extra thyroidal invasion, lymph node invasion, and distant metastasis was increased in tiny carcinoma compared with minute carcinoma of PTMC¹⁶.

On the other hand, some study groups revealed that clinicopathologic parameters are related with cancer progress such as multi-focality, bilaterality and distant metastasis were not correlated with tumor size in PTMC. Only the extra thyroidal extension and lymph node invasion are correlated. Thus, there is no longer meaningful to divide into subdivision of PTMC. Because the size (≤ 0.5 cm vs. > 0.5 cm) of PTMC did not have a significant impact on the patient outcome¹⁷.

Observational studies, which are performed without surgery for PTMC, suggested that PTMC can be managed by observation alone or by suppression therapy. This may be due to relatively benign biological behavior of PTMC. Interestingly study from Ito et al. initiated a study of which patients, 162 of the 732 patients chose observation (22%) and 570 opted for immediate surgery (78%), were offered observation alone without surgical therapy in 1993. Levothyroxine was administered to 11 patients for the purpose of suppress the thyroid-stimulating hormone as the patient's

choice. During follow-up (mean follow-up was 46.5 ± 21.5 months), more than 70% of tumors in the observation group either did not change or decreases of the tumor size as compared with their initial size at the time of diagnosis. During that period, 56 patients in the observation group had surgery and they were reclassified as the surgical treatment group. Of these 626 patients, the tumor recurrence rate was 2.7% at 5 years and 5.0% at 8 years after surgery, but none of the patients in the observation group had recurrences after surgery. As a results, this study opined that PTMC don't frequently become clinically apparent, and that patients can choose observation alone, while their tumors are not progressing¹⁸). In 2007, Ito et al. reported that only 6.7% of PTMCs had enlarged by 3.0 mm or more during 5 years of follow-up, and that lymph nodal metastasis had became detectable in 1.7% of the patients in the study. The authors concluded that observation without surgery could be an attractive alternative for patients without high-risk PMCT such as tumors located adjacent to trachea or invading the laryngeal nerve, FNAB findings suggesting high-grade malignancy, and highly suspicious of lymph nodes metastasis¹⁹). They also suggest that it is usually not late for surgeons to recommend surgical treatment when tumors show apparent progression.

In our case, the patient was exclude unfavorable prognostic factors which is exception of age. It was expected a good prognosis because the patient had a single PTMC without any lymph node and distant metastasis. So we decided to observe carefully during acupuncture alone treatment period. Prior to the acupuncture treatment, we should recommend the surgery to

the patient, if the tumor grows more than 3.0 mm or lymph node metastasis during the observation period of five years.

Based on the present study, we couldn't judge that the reason of patient's health status was evoked by acupuncture alone treatment or naturally course. There is no evidence to confirm the effect of acupuncture and its benefit in this case. Furthermore we can't explain the corresponded mechanisms of acupuncture effect due to no experience of PTMC treatment using acupuncture alone. As considering the above mentions, we think that the surgery is not the only means of treatment for PTMC. Moreover, the acupuncture treatment will be therapeutically used to treat the PTMC recent future and further studies with a longer follow-up and a large number of patients for PTMC are needed.

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