Professor Akira Miyauchi: the treatment of low-risk thyroid cancer

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Professor Akira Miyauchi (*Figure 1*) is President and COO of Kuma Hospital, Center of Excellence in Thyroid Care, Kobe, Japan. He is a Japanese endocrine surgeon, who is specialized in thyroid and parathyroid diseases. As the associate professor of the Department of Surgery, Kagawa Medical University, he proposed and initiated a clinical trial of active surveillance for low-risk papillary micro cancer in collaboration with Kuma Hospital in 1993. In 2001, he was appointed the President of Kuma Hospital. Since then, he has been keen on the study of evaluating treatments for papillary micro cancer, observation versus surgery. He is a visiting Professor of Surgery, Nippon Medical School, Tokyo, Japan, and University of Belgrade, Belgrade, Serbia. He is also serving as Chairman of the Asian Association of Endocrine Surgeons.

I met Prof. Miyauchi during the 2017 Annual Congress of International Society of Oncoplastic Endocrine Surgeons (ISOPES) in Conjunction with 3rd International Thyroid Oncological Conference of Zhejiang Province, in Hangzhou, China and was honored to do the interview with him. Please enjoy the video interview (*Figure 2*).

Figure 1 Professor Akira Miyauchi.

Figure 2 Professor Akira Miyauchi: the treatment of low-risk thyroid cancer (1).
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AOT: Patients with small localized papillary thyroid cancers have a 99% survival rate at about 20 years. However, the incidence of the low-risk thyroid cancer is growing. What are the reasons for this trend?

Prof. Miyauchi: The increasing incidence of small papillary thyroid cancer is a worldwide phenomenon. Some researchers may say that it is also because of the increasing incidence of thyroid cancer. However, it is mostly due to the increase in the detection of small thyroid cancer with the improvement and more frequent use of imaging studies, such as ultrasound, PET, CT scan or MRI.

AOT: What's the common treatment of low-risk papillary thyroid cancer in Japan?

Prof. Miyauchi: This question includes two groups of the disease. One is low-risk papillary microcarcinoma (PMC), which is papillary cancer ≤1 cm in size without lymph node or distant metastasis or invasion to the surrounding tissues. For tumors in this category, we recommend active surveillance as the first-line management. The other category is low-risk papillary cancer of larger tumor size. According to ATA guidelines and Japanese guidelines,

for low-risk papillary cancer, they recommend two methods, hemithyroidectomy or total thyroidectomy. At Kuma hospital, if the tumor is >1 and ≤2 cm, we perform hemithyroidectomy with paratracheal lymph node dissection. If the tumor is >2 cm, we perform total thyroidectomy and central node dissection. I know that there is a very strong argument of whether prophylactic lymph node dissection is necessary or not. But right now, most of Japanese endocrine surgeons are doing prophylactic central node dissection. To be exact, we, at Kuma Hospital, do prophylactic central neck dissection, but we do not do prophylactic lateral neck dissection.

AOT: How do you think about the controversy in the treatment of low-risk papillary thyroid cancer, regarding the initial surgery?

Prof. Miyauchi: There may be differences in treatments between the guideline recommendation and the actual clinical practice. The 2015 ATA guidelines accept both total thyroidectomy and hemithyroidectomy as the initial surgery for papillary thyroid carcinoma >1 and ≤4 cm without high-risk features such as nodal metastasis or extrathyroid extension. Some surgeons may preform total thyroidectomy and others might perform hemithyroidectomy for tumors in this category. In Kuma Hospital, if the papillary thyroid cancer is >2 cm, we perform total thyroidectomy, but we do not give radioactive iodine routinely after surgery. Total thyroidectomy may result in higher incidence of complication, especially if the surgery is performed by less experienced surgeons. Depending on the incidences of complications, the balance of merits and demerits of the initial surgeries might change. We should understand that the guidelines are used by many general surgeons, not only by very specialized ones.

AOT: In which situations or complications, you would recommend surgery or active surveillance for patients with low-risk papillary thyroid cancer?

Prof. Miyauchi: We make diagnosis with fine needle aspiration biopsy (FNAB) for nodules >0.5 cm with suspicious ultrasound features. When we initiated the active surveillance clinical trial in 1993, 24 years ago at Kuma Hospital, there was no confirmed evidence of which was a good option or which was not, so we proposed two methods equally, immediate surgery or active surveillance. Although I thought that observation should be much better, there was no confirmed evidence at that time. But now we have good evidences showing that active surveillance is much better than immediate surgery, regarding the incidences of the unfavorable events, such as vocal cord paralysis, hypoparathyroidism or patients who require thyroid hormone. In addition, the surgery costs about 4.1 times higher, comparing to active surveillance. Therefore, we think active surveillance is much better for the patients and for the society also. At present, we, at Kuma Hospital, recommend active surveillance as the first-line management for low-risk PMC of the thyroid.

AOT: What institutions of Japan have done to improve the level of evidence for the management of low-risk papillary thyroid microcancer?

Prof. Miyauchi: Kuma Hospital in Kobe and The Cancer Institute Hospital in Tokyo, only these two institutions performed active surveillance trial for low-risk PMC and reported their outcomes several times. However, many other hospitals are now following our studies.

AOT: What we could expect for treatment of low-risk papillary thyroid microcarcinoma in the future?

Prof. Miyauchi: The revised 2015 ATA guidelines write that thyroid nodules <1 cm, even if they show suspicious features on ultrasound examinations, do not require evaluation with FNAB. This is an American way to avoid unnecessary surgery for low-risk PMC. However, some of our patients with low-risk PMC showed progression of the disease such as tumor enlargement or appearance of lymph node metastasis. Therefore, we think that suspicious thyroid nodules require regular follow-up. Nowadays at Kuma Hospital, we diagnose PMCs ≥5 mm on cytology and notify the patients about the diagnosis, for two reasons. The size cutoff for performing FNAB for thyroid nodules with suspicious sonographic features in the Japan Association of Breast and Thyroid Sonology guidelines is 5 mm. If we do not perform an FNAB, the patient might go and see another physician who might perform an FNAB, and the patients may be told both that Kuma Hospital 'missed the diagnosis' of thyroid cancer and that they should undergo surgery immediately. This is unhappy for the patients and Kuma Hospital. The second reason is to encourage patients undergoing regular check-up. We do not think that this is possible without diagnosis. Currently at Kuma hospital, we make diagnosis with fine needle aspiration (FNA) and we

strongly recommend active surveillance for the patients. That is our current practice.

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References

1. Zhou S. Professor Akira Miyauchi: the treatment of low-risk thyroid cancer. Asvide 2017;4:254. Available online: http://www.asvide.com/articles/1563

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