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Updates on the Management of Papillary Thyroid Microcarcinoma

Papillary thyroid microcarcinoma (PTMC) is a specific subtype of papillary thyroid carcinoma characterized by a size of ≤ 1 cm in the largest diameter. It represents 30% of differentiated thyroid carcinomas. PTMC often presents incidentally through imaging or surgery for other thyroid conditions, but it can also be symptomatic. The majority of PTMC cases have an excellent prognosis, with a near 100% long-term survival rate, a low rate of distant metastasis (0.4%), and a low rate of local-regional recurrence (2.5%).

The primary aim of managing PTMC is to identify intermediate and high-risk diseases, while minimizing iatrogenic morbidities in low-risk cases. The workup for PTMC involves obtaining the patient's history, neck ultrasonography, and thyroid function tests. The American Thyroid Association 2015 Risk Stratification System is utilized for categorizing patients into different risk groups.

For low-risk PTMC patients, the conventional management would be surgery i.e. hemithyroidectomy. The use of prophylactic central compartment neck dissection for low-risk PTMC remains controversial. Radioactive iodine treatment is usually not recommended for these patients. Active surveillance may be considered for low-risk PTMC locating away from critical structures such as the trachea and recurrent laryngeal nerve. The follow-up protocol for these patients includes lifelong ultrasonography assessments, initially conducted every six months for 1-2 years, and then once a year thereafter.

Recently, thermal ablation has emerged as a promising treatment option for low-risk PTMC. Radiofrequency ablation (RFA) and microwave ablation (MWA) have demonstrated promising mid-term outcomes with low complication rates in various studies.

In conclusion, the majority of PTMC carries excellent prognosis. Thorough evaluation is essential to differentiate low-risk from intermediate and high-risk disease, in order to avoid overtreatment. Management options for PTMC include lobectomy, active surveillance, and ablative therapy. As more evidence and longer-term results become available, treatment strategies for PTMC may continue to evolve.

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甲状腺乳头状微癌的治疗进展

甲状腺乳头状微癌(Papillary Thyroid Microcarcinoma, PTMC)是甲状腺乳头状癌的一种特殊亚型，以最大直径 $\leq 1\text{cm}$ 为特征，占分化型甲状腺癌的30%。PTMC常因影像学检查或其他甲状腺疾病手术而发现，但它也可以是具有症状的。大多数PTMC病例预后良好，长期生存率接近100%，远处转移率低(0.4%)，局部区域复发率低(2.5%)。

管理PTMC的主要目的是识别中风险和高风险疾病，同时尽量减少低风险病例的医源性发病率。PTMC的检查包括患者病史、颈部超声检查和甲状腺功能检查。美国甲状腺协会2015年风险分层系统可以将患者分为不同的风险组。

对于低风险的PTMC患者，传统的治疗方法是手术，即甲状腺切除术。使用预防性中央区颈清扫术治疗低危PTMC仍有争议。通常不建议对这些患者进行放射性碘治疗。对于远离关键结构(如气管和喉返神经)的低风险PTMC，可以考虑主动监测。这些患者的随访方案包括终身超声检查评估，最初每6个月进行1-2年，之后每年进行一次。

最近，热消融已成为低风险PTMC的一种有前景的治疗选择。射频消融(RFA)和微波消融(MWA)在各种研究中显示出有希望的中期结果，并发症发生率低。

总之，大多数PTMC预后良好。为了避免过度治疗，必须进行彻底的评估，以区分低风险、中高风险疾病。PTMC的治疗方案包括肺叶切除术、主动监测和消融治疗。随着越来越多的证据和长期结果的出现，PTMC的治疗策略可能会继续发展。