

Ps-Tg水平在分化型甲状腺癌诊疗中的应用

《现代肿瘤医学》[ISSN:1672-4992/CN:61-1415/R] 期数: 2019年01期 页码: 179-182 栏目: 综述 出版日期: 2018-11-30

Title: The application of ps-Tg level in the diagnosis and treatment of differentiated thyroid carcinoma

作者: 杨斌斌; 文丹; 付国旭; 谢建平
川北医学院附属医院, 四川南充 637000

Author(s): Yang Binbin; Wen Dan; Fu Guoxu; Xie Jianping
Affiliated Hospital of Chuanbei Medical College, Sichuan Nanchong 637000, China.

关键词: 甲状腺球蛋白; 分化型甲状腺癌; 131I

Keywords: thyroglobulin; differentiated thyroid carcinoma; 131I

分类号: R736.1

DOI: 10.3969/j.issn.1672-4992.2019.01.045

文献标识码: A

摘要: 血清甲状腺球蛋白 (thyroglobulin, Tg) 是分化型甲状腺癌 (differentiated thyroid carcinoma, DTC) 术后随访最常用的血清标志物, 用于监测DTC复发及转移。然而血清Tg的检测受到多种因素的干扰, 如术后残余甲状腺组织、促甲状腺激素 (thyroid stimulating hormone, TSH) 、甲状腺球蛋白抗体(thyroglobulin antibody, TgAb)、甲状腺过氧化物酶抗体(thyroid peroxidase antibody, TPOAb)等。因此已往认为术后131I治疗前检测激性Tg (preablatative stimulated thyroglobulin, ps-Tg) (TSH>30 μIU/ml刺激状态下的 Tg 水平) 水平意义不大。2009年美国ATA指南指出, DTC 患者ps-Tg水平在疾病状态的预测中有一定作用。近年来也有越来越多的研究表明, 术前血清 Tg 水平的监测具有重要的临床价值。本文旨在对Tg在甲状腺癌患者疾病监测中的所受到的干扰因素及DTC 术后诊疗过程中的意义进行综述。

Abstract: Serum thyroglobulin(Thyroglobulin, Tg) is the most commonly used serum marker for the follow-up of differentiated thyroid carcinoma(DTC), which is used to monitor the recurrence and metastasis of DTC.However, the detection of serum Tg was disturbed by many factors, such as residual thyroid tissue, thyroid stimulating hormone (TSH) , thyroglobulin antibody(TgAb) after operation thyroid peroxidase antibody(TPOAb) etc.Therefore, it is believed that the level of preablatative stimulated thyroglobulin(ps-Tg) (TSH>30 μIU/ml) in patients with 131I before treatment is not significant, which is easily interfered by the above factors.But with the guidelines of the American Thyroid Association pointed out that in 2009 the level of ps-Tg in patients with DTC disease may have certain prediction function, more and more research show in recent years, preoperative monitoring of serum Tg levels has important clinical value.The purpose of this paper is to review the interference factors of Tg monitoring in recent years and the significance in the diagnosis and treatment of DTC.

参考文献/REFERENCES

- [1] Liu Chunping, Zhao Qiuyang, Li Zhi, et al.Mixed subtype thyroid cancer: A surveillance, epidemiology, and end results database analysis [J] .Oncotarget, 2017, 8(49): 86556-86565.
- [2] Wu Yijie.Thyroid cancer has become a serious public health problem [J] .Journal of Chinese Endocrinology Metabolism, 2015, 31(1): 1-3. [吴艺捷.甲状腺癌已成为严重的公共健康问题 [J] .中华内分泌代谢杂志, 2015, 31(1): 1-3.]
- [3] Liu YQ, Zhang SQ, Chen WQ, et al.Analysis of the state of death and epidemic trend of thyroid cancer in China from 2003 to 2007 [J] .Chinese Journal of Epidemiology, 2012, 33(10): 1044-1048. [刘玉琴, 张书全, 陈万青, 等.中国2003-2007年甲状腺癌发病死亡现状及流行趋势分析 [J] .中华流行病学杂志, 2012, 33 (10) : 1044-1048.]
- [4] Wu Xi, Wang RF.Application and progress of radionuclide in the diagnosis and treatment of differentiated thyroid carcinoma [J] .Journal of Oncology, 2014, 20(11): 904-907. [吴茜, 王荣福.放射性核素在分化型甲状腺癌诊疗中的应用现状和进展 [J] .肿瘤学杂志, 2014, 20(11): 904-907.]
- [5] Wu Bo, Fan YB.The present situation of thyroid cancer treatment in China: Insufficient, irregular and

- excessive coexistence [J]. Chin J Intern Med 2017, 56(1): 11-14. [伍波, 樊友本.我国甲状腺癌治疗现状: 不足、不规范和过度并存 [J] 中华内科杂志 2017, 56(1): 11-14.]
- [6] Long Bin, Zhang Lijun, Ye Ting, et al. Baseline stimulation of thyroid gland levels in predicting the efficacy of 131I "Qing" in papillary thyroid cancer [J]. Journal of Oncology, 2016, 22(6): 473-477. [龙斌, 张丽军, 叶挺, 等. 基线刺激甲状腺球蛋白水平在预测甲状腺乳头状癌131I “清甲”疗效的价值 [J]. 肿瘤学杂志, 2016, 22 (6) : 473-477.]
- [7] Vhasbek Z, Turgut B, Kilicli F, et al. Importance of postoperative stimulated thyroglobulin level at the time of 131I ablation therapy for differentiated thyroid cancer [J]. Asian Pacific Journal of Cancer Prevention, 2014, 15(6): 2523-2527.
- [8] Koyano Y, Taruani G. Monoclonal antibodies to thyroglobulin elucidate differences in proteins structure of thyroglobulin in healthy individuals and those with papillary adenocarcinoma [J]. J Clin Endocrinol Metab, 1988, 61(2): 343-344.
- [9] Li Na, Yang Fan. Progress in the study of thyroglobulin and its antibodies [J]. J Med Postgra, 2017, 30(8): 869-872. [李娜, 杨帆. 甲状腺球蛋白及其抗体研究进展 [J]. 医学研究生学报, 2017, 30(8): 869-872.]
- [10] ME Girelli, D De Vido. Serum thyroglobulin measurements in differentiated thyroid cancer [J]. 2000, 54(6): 330-303.
- [11] Sanchez R, Espinosa-delos Monteros AL, Mendoza V, et al. Adequate thyroid-stimulating hormone levels after levothyroxine discontinuation in the follow-up of patients with well-differentiated thyroid carcinoma [J]. Archives of Medical Research, 2002, 33(5): 478-481.
- [12] Yang Jinhua, Yang Dianyu, Wang Cailing. Serum thyroid gland levels in the prognosis of postoperative differentiated thyroid carcinoma [J]. Medical Review of Clinical significance, 2016, 22(17): 516-518.
- [13] Zhang WJ, Deng HF, Pan ZM, et al. Influence of endogenous TgAb upon serum Tg measurement results and Tg positive rate in patients with differentiated thyroid carcinoma [J]. 2013, 30(4): 803-807. [张文杰, 邓候富, 潘明志, 等. 分化型甲状腺癌患者内源性T g A b对血清T g 测定值、T g 阳性率的影响 [J]. 生物医学工程学杂志, 2013, 30(4): 803-807.]
- [14] Tang GS, Xu Jin, Yu Ying, et al. Correlation between serum Tg and endogenous TgAb in differentiated thyroid carcinoma [J]. Journal of Sichuan University: (Medical Science), 2011, 42(6): 856-860. [唐恭顺, 胥劲, 俞英, 等. 分化型甲状腺癌患者血清Tg测定值与内源性TgAb浓度的相关性研究 [J]. 四川大学学报(医学版), 2011, 42 (6) : 856-860.]
- [15] Teng Zhao, Jun Liang, Tianjun, et al. Serial stimulated thyroglobulin measurements are more specific for detecting distant metastatic differentiated thyroid cancer before radioiodine therapy [J]. Chinese Journal of Cancer Research, 2017, 29(3): 213-222.
- [16] He Jian, Pan Mingzhi, Huang Miao, et al. Studies on the influence of different TgAb concentration on serum Tg radioimmunoassay [J]. Chinese medical science, 2014, 4(8): 7-12. [何健, 潘明志, 黄蕤, 等. 不同TgAb浓度对血清Tg放免法浓度测值影响的研究 [J]. 中国医药科学, 2014, 4(8): 7-12.]
- [17] Wu Xia, Xu Jin, Ni Jian, et al. The interference of TgAb on Tg determination by dilution curve method [J]. Journal of Sichuan University(Medical Edition), 2013, 44(3): 432-435. [吴瑕, 胥劲, 倪建, 等. 稀释曲线法评价TgAb对T g 测定的干扰 [J]. 四川大学学报(医学版), 2013, 44 (3) : 432-435.]
- [18] Wang YJ, Shen YH, Wang HL, et al. The predictive value of serum TgAb level in metastasis of postoperative metastatic thyroid carcinoma [J]. Progress in Modern Biomedicine, 2017, 27(17): 5279-5282. [王玉金, 申艳红, 王洪雷, 等. 血清TgAb水平在分化型甲状腺癌术后转移复发中的预测价值 [J]. 现代生物医学进展, 2017, 27(17):5279-5282.]
- [19] Durante C, Tognini S, MontesanoT, et al. Clinical aggressiveness and long-term outcome inpatients with papillary thyroid cancer and circulating anti-thyroglobulin autoantibodies [J]. Thyroid, 2014, 24(7): 1139-1145.
- [20] Yan Kai. The value of Tg and TgAb in the treatment of 131I positive thyroid cancer patients with 131I [J]. Chinese and Foreign Medical, 2017, 36 (5) : 29-33. [严凯.Tg和TgAb在TgAb阳性甲状腺癌患者131I治疗的价值 [J]. 中外医疗, 2017, 36(5): 29-33.]
- [21] Li TJ, Lin YS, Liang J, et al. Prediction of the distant metastasis of papillary thyroid carcinoma before 131I treatment [J]. Chinese Journal of Nuclear Medicine and Molecular Imaging, 2012, 32(3): 189-191 [李田军, 林岩松, 梁军, 等. 131I治疗前刺激性Tg对乳头状甲状腺癌远处转移的预测价值 [J]. 中华核医学与分子影像杂志, 2012, 32 (3) : 189-191.]
- [22] Phan HT, Jager PL, Van Der Wal JE, et al. The follow-up of patients with differentiated thyroid cancer and undetectable thyroglobulin(Tg) and Tg antibodies during ablation [J]. Eur J Endocrinol, 2008, 158(1): 77-83.
- [23] Shan Fengling. Research progress and clinical application of thyroid gland [J]. Chinese Journal of General Surgery, 2017, 26(5): 648-654. [单凤玲. 甲状腺球蛋白实验研究进展与临床应用 [J]. 中国普通外科杂志, 2017, 26(5): 648-654.]
- [24] Cooper DS, Doherty GM, Haugen BR, et al. Revised American Thyroid Association management guidelines for patients with thyroid nodules and differentiated thyroid cancer: The American Thyroid Association(AT) guidelines taskforce on thyroid nodules and differentiated thyroid cancer [J]. Thyroid, 2009, 19(11):1167-1214.
- [25] Tuttle RM, Tala H, Shah J, et al. Estimating risk of recurrence in differentiated thyroid cancer after total thyroidectomy and radioactive iodine remnant ablation: Using response to therapy variables to modify the initial risk estimates predicted by the new American thyroid association staging system [J]. Thyroid, 2010, 20(12): 1341-1349.

- [26] Rosario PW, Mineiro Filho AF, Prates BS, et al.Postoperative stimulated thyroglobulin of less than 1 ng/ml as a criterion to spare low-risk patients with papillary thyroid cancer from radioactive iodine ablation [J]. *Thyroid*, 2012, 22(11): 1140-1143.
- [27] González C, Aulinás A, Colom C, et al.Thyroglobulin as early prognostic marker to predict remission at 18-24 months, in differentiated thyroid carcinoma [J]. *Clin Endocrinol*, 2014, 80(2):301-306.
- [28] Hasbek Z, Turgut B, Kilicli F, et al.Importance of postoperative stimulated thyroglobulin level at the time of I-131 ablation therapy for differentiated thyroid cancer [J]. *Asian Pacific Journal of Cancer Prevention*, 2014, 15(6): 2523-2527.
- [29] Fatima N, Zaman MU, Ikram M, et al.Baseline stimulated thyroglobulin level as a good predictor of successful ablation after adjuvant radioiodine treatment for differentiated thyroid cancers [J]. *Asian Pacific Journal of Cancer Prevention*, 2014, 15(15): 6443-6447.
- [30] Lim I, Kim SK, Hwang SS, et al.Prognostic implication of thyroglobulin and quantified whole body scan after initial radioiodine therapy on early prediction of ablation and clinical response for the patients with differentiated thyroid cancer [J]. *Ann Nucl Med*, 2012, 26(10): 777-786.
- [31] Park HJ, Jeong GC, Kwon SY, et al.Stimulated serum thyroglobulin level at the time of first dose of radioactive iodine therapy is the most predictive factor for therapeutic failure in patients with papillary thyroid carcinoma [J]. *Nucl Med Mol Imaging*, 2014, 48(4): 255-261.
- [32] Zhao Teng, Jun Liang, Li Tianjun, et al.Serial stimulated thyroglobulin measurements are more specific for detecting distant metastatic differentiated thyroid cancer before radioiodine therapy [J]. *Chin J Cancer Res*, 2017, 29(3): 213-222.
- [33] Lee CW, Roh JL, Gong G, et al.Risk factors for recurrence of papillary thyroid cancer carcinoma with clinically node-positive lateral neck [J]. *Ann Surg Oncol*, 2015, 22(1): 117-124.
- [34] Chen Peng, Song CX, Lu Wu, et al.The tumor metastasis was predicted after the first 131I treatment of preoperative thyroidism [J]. *Chinese Medical Imaging Technology*, 2016, 32(12): 1862-1865. [陈鹏, 宋长祥, 陆武, 等.分化型甲状腺癌术后首次131I治疗前刺激性甲状腺球蛋白水平预测肿瘤转移 [J].中国医学影像技术, 2016, 32(12): 1862-1865.]
- [35] Zhao Teng, Liang Jun, Li Tianjun.Value of serial preablative thyroglobulin measurements: Can we address the impact of thyroid remnants [J]. *Nucl Med Commun*, 2016, 37(6): 632-639.
- [36] Wang ZP, Wu Bo, Kang Jie, et al.diagnostic and monitoring value of serum thyroid gland in differentiated thyroid carcinoma [J]. *China General External Foundation and Clinical Journal*, 2017, 24(3): 391-395. [王宗平, 伍波, 康杰, 等.血清甲状腺球蛋白水平对分化型甲状腺癌的诊断和监测价值 [J].中国普外基础与临床杂志, 2017, 24(3): 391-395.]
- [37] Hou WK.TGSF and Tg jointly detect the diagnostic value of thyroid carcinoma [J]. *Medical and Clinical*, 2017, 14(6): 879-880. [侯卫科. T G S F 和 T g 联合检测甲状腺癌的诊断价值 [J]. 检验医学与临床, 2017, 14(6): 879-880.]

备注/Memo: -

更新日期/Last Update: 2018-11-30