PEER-REVIEW REPORT

Name of journal: *World Journal of Clinical Cases*

Manuscript NO: 83349

Title: Update on the current management of persistent and recurrent primary hyperparathyroidism after parathyroidectomy

Provenance and peer review: Invited Manuscript; Externally peer reviewed

Peer-review model: Single blind

Reviewer's code: 05142913

Position: Peer Reviewer

Academic degree: Doctor, MBBS

Professional title: Doctor

Reviewer's Country/Territory: Saudi Arabia

Author's Country/Territory: Greece

Manuscript submission date: 2023-01-18

Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-01-18 18:32

Reviewer performed review: 2023-01-18 18:33

Review time: 1 Hour

Scientific quality	[ ] Grade A: Excellent [Y] Grade B: Very good [ ] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No novelty
Creativity or innovation of this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No creativity or innovation

Scientific significance of the conclusion in this manuscript	[ ] Grade A: Excellent [Y] Grade B: Good [ ] Grade C: Fair [ ] Grade D: No scientific significance
Language quality	[ ] Grade A: Priority publishing [Y] Grade B: Minor language polishing [ ] Grade C: A great deal of language polishing [ ] Grade D: Rejection
Conclusion	[ ] Accept (High priority) [Y] Accept (General priority) [ ] Minor revision [ ] Major revision [ ] Rejection
Re-review	[ ] Yes [Y] No
Peer-reviewer statements	Peer-Review: [Y] Anonymous [ ] Onymous
	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

Wonderful review, very concise precise and to the point

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Reviewer's code: 06409127

Position: Peer Reviewer

Academic degree: MD

Professional title: Researcher, Staff Physician

Reviewer's Country/Territory: Russia

Author's Country/Territory: Greece

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Reviewer chosen by: AI Technique

Reviewer accepted review: 2023-01-18 10:26

Reviewer performed review: 2023-01-25 11:15

Review time: 7 Days

Scientific quality	[ ] Grade A: Excellent [ ] Grade B: Very good [Y] Grade C: Good [ ] Grade D: Fair [ ] Grade E: Do not publish
Novelty of this manuscript	[ ] Grade A: Excellent [ ] Grade B: Good [Y] Grade C: Fair [ ] Grade D: No novelty
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	Conflicts-of-Interest: [ ] Yes [Y] No

SPECIFIC COMMENTS TO AUTHORS

The manuscript is an overview of the diagnostic and treatment options in P-HPT/R-HPT. This is an important problem for endocrinologists and endocrine surgeons, requiring detailed coverage. Specific comments: 1 Title. The title fully reflects the main subject of the manuscript? 2 Abstract. The abstract is very voluminous, unstructured and difficult to perceive. It is better to reduce the amount of information in the abstract and indicate only the main problems that the review is devoted to. 3 Key Words. Do the key words reflect the focus of the manuscript? Keywords should be selected from the list of Mesh terms for more efficient article categorization (https://www.ncbi.nlm.nih.gov/mesh/?term=) 4 Introduction. "Cure has been defined as the restoration of calcium levels (normal homeostasis) lasting six months at a minimum" - a reference is needed, because this definition is not entirely correct. An increase in PTH with normocalcemia can also be observed with a recurrence of the disease, as You mention later. "Persistent hyperparathyroidism (P-HPT) is defined as the condition where calcium either does not return to normal values or rises again within 6 months of the initial parathyroidectomy for pHPT" - a reference is needed.

"Subsequently, preoperative 25-hydroxyvitamin D level must be assessed and corrected if low for a good outcome" - to my knowledge, it's true in patients without severe hypercalcemia.   5 Diagnosis.   "FNA (fine needle aspiration) of the suspected parathyroid gland preoperatively may be useful by providing cytology and PTH levels" - to my knowledge, cytological characteristics can't provide us information about the parathyroid origin (normal tissue, hyperplasia, adenoma, carcinoma). So, FNA is a method to prove that the detected mass produces PTH.   The section must be supplemented with information on indications and contraindications for certain diagnostic tests. For example, the introduction of an iodine-containing contrast is undesirable in case of a decrease in the filtration function of the kidneys, etc. MRI was also mentioned earlier, however, further its role in diagnosis is not covered in detail. The article would be better with a schematic algorithm for diagnosing P-HPT / R-HPT and choosing a topical diagnostic method. More coverage of genetic diagnosis in P-HPT/R-HPT is needed, especially in the context of MEN syndromes.   6 Management.   "diseased gland" - possibly, it's better to use the term "affected" In the described studies, relapses occurred a long time after the first intervention. It should be noted in the text that these tumors probably developed de novo during the observation period, and were not missed during the first operation. In the mentioned French study (reference #41) cardiac history was a Predictive risk factors for reoperation. More information is needed: what does the "cardiac history" mean? How can cardiac history influence the effect of surgery? "In patients with large normal parathyroid and pHPT, excision will have a beneficial effect" - what does this paragraph mean? How can we determine the histological origin of the parathyroid before surgery? "Thus, rechecking nerve function preoperatively is mandatory" - intraoperative neuromonitoring is also a useful tool. How do authors determine "dwarf or giant" adenomas? "It has been postulated that the success of parathyroidectomy is reflected in a decrease in the

neutrophil-to-lymphocyte ratio (NLR) and platelet-to-lymphocyte ratio (PLR)" - more information on this topic is needed. "Multiglandular disease (its predictors are negative sestamibi scintigraphy, diabetes and elevated osteocalcin)" - how can diabetes and osteocalcin predict intraoperative complications? What's the pathophysiological mechanism? More details are needed. For recurrence disease after autotransplantation, a Casanova diagnostic test must be described. Besides cinacalcet, antiresorptive drugs can also be used in conservative treatment of patients with P-HPT / R-HPT. 7 Intraoperative tools for parathyroid identification. "Visual identification of parathyroid by near-infrared autofluorescence angiography (infrared spectroscopy) [62,63] or indocyanine green (ICG) angiography [63-65], both with high sensitivity of up to 82% and 81%, respectively [63]" - in this sentence the verb is missing. "ex vivo parathyroid aspiration cytological searching" - this part needs more details. 8 Illustrations and tables. A scheme of diagnostic and treatment approach will be very useful. 9 Units. Does the manuscript meet the requirements of use of SI units? Yes 10 References. The manuscript appropriately cite the latest, important and authoritative references. 11 Quality of manuscript organization and presentation. The manuscript is sometimes confusing, so more clear organization of the text (maybe with several new subheadings) will make the paper much better. Style and language sometimes needs correction.