

Primary hyperparathyroidism due to parathyroid adenoma

To the Editor

I read with much interest the article "Primary hyperparathyroidism [pHPT] due to parathyroid adenoma" by Koksai et al.¹ It was an interesting study on the topic, but I think it would have been more appropriate if the authors had further clarified some specific points in the article. The surgical strategy used by Koksai and colleagues is bilateral neck exploration. In this conventional procedure, all 4 parathyroid glands are explored, located, and macroscopically assessed in terms of size, weight, color, and firmness; and excision of the adenoma is usually accompanied by biopsy of at least one normal-looking gland to secure the diagnosis of adenoma versus hyperplasia.² Koksai et al¹ mentioned that patients were diagnosed as having parathyroid adenoma on histopathological examination. The differentiation of parathyroid adenoma from hyperplasia, even for experienced pathologists, is at times challenging.³ It would be therefore, interesting to know the criteria used by the authors to distinguish adenoma from hyperplasia, especially, if they have not obtained biopsy from normal glands. The finding that 10% of patients had high parathyroid hormone (PTH) levels during the post-operative period is an interesting observation. Although there have been reports of postoperative elevation of serum intact PTH,⁴ it would be of interest to know the authors' explanation for this finding. The authors mentioned, however, that patients had normal PTH levels at one-month follow-up. Considering that pHPT patients are usually followed for 6 months after parathyroidectomy for the possibility of persistent hyperparathyroidism,⁵ I am eager to know how long Koksai and co-workers followed their patients. Another interesting point in the article is the discussion on the sensitivity of ultrasound and sestamibi scanning. The sensitivity of ultrasound has been reported as 73%, and of sestamibi scanning, 69%. The authors, however, have not reported the weights of tumors removed; hence, sensitivity figures for ultrasound and scintigraphy cannot be fairly compared. Particularly, one would expect to know the weights of those 11 adenomas whose both ultrasound and sestamibi scanning results were negative. The high female/male ratio of patients in pHPT has been documented in literature and reported to be around 3:1.⁶ This ratio is above 7 (46:6) in Koksai et al's study.¹ Such a significant

deviation from the literature might be a result of the small number of patients (n=52), but this finding still deserved a comment in the discussion and could have been supplemented by other possible reasons.

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Reply from the Author

Thank you for the opportunity to respond to Dr. Hamidi's comments regarding the mentioned article entitled "Primary hyperparathyroidism due to parathyroid adenoma".¹ Since this study is a retrospective one, while analyzing the data we already knew that all of the histopathological diagnoses were adenomas. Also, there were no pathological findings in the other parathyroid glands according to the preoperatively performed ultrasound and scintigraphy. Furthermore, after the operation, the abnormal parathyroid hormone and calcium levels returned to normal limits during the follow up period and all of the patients' symptoms resolved. During the postoperative period, 10% of the patients had high PTH levels. However, this finding is not specific to our study. In the literature there are many reports with persistent high PTH levels in 15-40% of the patients after undergoing surgery for parathyroid adenomas.^{7,8} Although the reason for this is not clear, vitamin D deficiency, mild hypocalcemia, renal dysfunction, persistent or recurrent hyperparathyroidism and bone remineralization may be responsible. It is reported that after the operation in many patients, the PTH remains at high levels for around 2 weeks in spite of normocalcemia and then it decreases.⁹ In the postoperative period, controls for the PTH levels are not indicated or recommended, as they are not cost-effective if normocalcemia occurs. In our study, during the early postoperative period, high PTH levels in 10% of the patients regressed to normal limits at the first months follow up. It is also known that recurrent disease is most common in the 6-month period after the operation.⁹ Our follow up period was a minimum of 6 months (range 6 months to 4 years). As Dr. Hamidi mentioned, the fatty tissue and oxyphil cell components are related to the sensitivities of ultrasound and scintigraphy as well as the weight of the adenoma.¹⁰ Since this study was performed retrospectively, we do not have the data on adenoma weights for all of the cases, and that is why we could not give statistically

valid information. We also have another study on the weight of the parathyroid tumors and sensitivity of methoxy isobutyl isonitrile-scintigraphy, which we hope to publish shortly. Turkey is an endemic country for thyroid diseases and in our study, 35% of the patients had synchronous thyroid and parathyroid pathologies. This state also decreased the sensitivities of imaging studies. The high female/male ratio of the patients might be the result of the small number of the study group, however, there are some other studies with similar results.¹¹ These results can also be related to the race in which the study was performed.

We thank Dr. Hamidi for emphasizing the specific points on the parathyroid adenomas.

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