
Preface

The ever-growing interest in imaging of the parathyroid glands can be explained predominately by two factors. First of all, the former opinion about the rarity of primary hyperparathyroidism (PHPT) has vanished. Moreover, PHPT is now considered a third endocrine epidemic. Due to the prolonged life expectancy of patients treated over a long period with hemodialysis or peritoneal dialysis, the incidence of secondary (renal) hyperparathyroidism has increased significantly. The latter has often been treated with parathyroidectomy of different volumes up to total parathyroidectomy, with a subsequent autotransplantation of the parathyroid tissue intraoperatively or some time later, after the development of clinical signs of hypoparathyroidism.

This increased interest in hyperparathyroidism has also been caused by the widespread studies of the problem of postmenopausal osteoporosis. The final diagnosis of postmenopausal osteoporosis requires the exclusion of PHPT and adrenohypercorticism, because osteoporosis can be a symptom of these. Some cases of the invalid diagnosis of postmenopausal osteoporosis have been described. These diagnoses were followed by the prescription of calcium and vitamin D preparations pernicious for patients.

Recently, the interest of physicians in parathyroid imaging has increased even further due to the thorough investigation of its diagnostic value and the specificity of each of the present preoperative and intraoperative imaging techniques. This has led to an increased interest of surgeons in parathyroid surgery all over the world and especially in those countries with a significant prevalence of PHPT. It has grown even more after the beginning of the new era in parathyroid surgery associated with the application of endovideosurgical approaches.

It is not a secret that endoscopic surgery attracts many young surgeons. Endoscopic parathyroid surgery is no exception. But young surgeons should not be allowed to start with endoscopic parathyroid surgery without experience with the open approach. Moreover, endoscopic parathyroid surgery still remains a prerogative of certain surgeons, and optimization of the method is far from complete. For supporters of endoscopic approaches to parathyroid surgery, the cosmetic effect is apparently a determinant, though the open approach provides a shorter duration of the surgical intervention. But the main point is not even this. Despite the imaging technique outcomes, which seem quite reliable to a surgeon, diagnostic errors can never be excluded. With the open approach, the revision of all parathyroids (including ectopic ones) and thyroid glands is obligatory, as it can provide revision of all lymph

nodes. However, with an endoscopic approach, it becomes a very difficult or even an impossible task. It is known that hyperparathyroidism is often associated with different forms of nodular goiter, which become a cause of frequent simultaneous operations. It should be noted that frequent operations for PHPT in patients who have earlier undergone surgical treatment for different thyroid diseases are associated with specific “technical difficulties”.

If a surgeon has doubts regarding the nature of a parathyroid adenoma and suspects adenomatous parathyroid hyperplasia, he should turn to open surgical access or postpone surgical intervention for some time, not to mention the fact that the thyroid nodes missed will often require repeated operations, as well. Attention should be also paid to the fact that the strong advocates of the endovideosurgical approach (as demonstrated by the medical literature devoted to recurrent or persisting PHPT) never indicate which approach – open or endoscopic – they have used in their first operation. One may only suppose that most frequently that first approach was an endovideosurgical operation, which, by the way, is not an easy procedure. Even with an open lateral approach applied by a number of surgeons who preoperatively are sure about the exact location of the parathyroid adenoma, a mistaken interpretation of an adenomatous parathyroid gland as a parathyroid adenoma can not be excluded. In such situations, it will be impossible to avoid the persisting hyperparathyroidism. All of the above-mentioned, however, does not mean that the authors of this book are the orthodox opponents of the new method. It is important to emphasize that a first successful operation can never be performed without an accurate preoperative localization of the adenomas of the parathyroid gland, which have been diagnosed with the use of modern imaging techniques. These methods help to prevent unnecessary surgical intervention in patients with hyperplasia of parathyroid glands.

Despite the recent accumulation of experience in the use of different imaging techniques, parathyroid ultrasound (US) remains the most informative diagnostic method. Today, an important role in solving the problem of hyperparathyroidism and, in particular, one of its aspects – parathyroid imaging – is played by modern equipment. However, the difficulties are predominantly associated with the lack of highly qualified specialists in US.

The history of the surgical treatment of hyperparathyroidism can be divided into two stages: before introduction of the imaging methods and after. Development of the endovideosurgical approach was a consequence of these methods. However, a true, scientifically grounded history of hyperparathyroidism surgery requires a profound analysis involving all aspects of this interdisciplinary disease.

The authors hope that this book will be useful for surgeons who will apply imaging methods in their work more attentively. Moreover, today it is extremely important to perform ultrasonography directly before the operation.

The authors will greatly appreciate any comments, which will certainly be taken into account in the next edition of the book. Other investigators also have distinct experiences with regard to these problems, and we are looking forward to receiving their opinions.

The Parathyroid Glands

Imaging and Surgery

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2013, XII, 157 p. 113 illus., 59 illus. in color., Hardcover

ISBN: 978-3-642-30872-7