from metastases, which usually affect lymph nodes, bone, orbits, liver, skin, lung and brain. The diagnosis is made with clinical suspicion and imaging tests such as CT or magnetic resonance imaging (MRI). It is necessary to add a study of catecholamines in urine since these tumors can be functional. Both for the extension and follow-up studies, it is necessary to perform ^{123}I-MIBG scintigraphy. Treatment is surgical, whenever possible. Chemotherapy is used in advanced stages to reduce tumor size, while radiotherapy is used as a complement to surgery when complete resection of the tumor has not been achieved. The prognosis in children is good, and survival increases at lower ages of onset. Adults have a poor prognosis, with 3-year and 5-year survival rates of 46% and 36%, respectively. All the cases in adults that exist in the current literature have a survival of less than 20 years from diagnosis[5,6]. This case represents a poor prognosis given the age of the patient and his poor differentiation in the anatomopathological characteristics, although the follow-up is still too short to draw prognostic conclusions.

In conclusion, although the onset of neuroblastic tumors in adults is very rare (there are very few cases published in the current literature) and has a poor prognosis, the case we report remains in remission 22 months after surgical and radiotherapy treatment.

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Local relapse of parathyroid adenomas: an uncommon cause of recurrent primary hyperparathyroidism☆

Recidiva local de adenomas de paratiroides como causa infrecuente de hiperparatiroidismo primario recurrente

Recurrent primary hyperparathyroidism (HPTP-R) is defined as elevated serum calcium and parathyroid hormone (PTH) levels after parathyroidectomy, with normalization of these parameters for at least 6 months. It differs from persistent primary hyperparathyroidism (HPTP-P), in that in the latter, postoperative hypercalcemia is not resolved in this period.[1]

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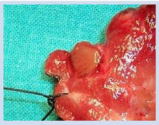
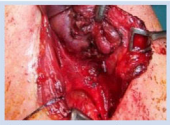
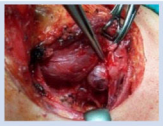
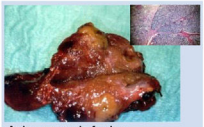
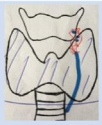
	Caso 1 Mujer 61 años	Caso 2 Mujer 64 años	Caso 3 Mujer 58 años	Caso 4 Mujer 44 años	Caso 5 Mujer 45 años
Primera cirugía	Centro externo Abordaje selectivo Adenoma superior derecho	Caso propio Abordaje selectivo Adenoma superior derecho	Caso propio Abordaje selectivo Adenoma superior derecho	Caso propio Exploración bilateral Adenoma inferior derecho	Centro externo Exploración bilateral y tiroidectomía total Adenoma superior izquierdo
Hallazgos Segunda cirugía	 Adenoma superior derecho intratiroideo	 Adenoma superior derecho encapsulado cercano al NLR	 Adenoma superior derecho encapsulado cercano a ATI	 Adenoma inferior derecho intratiroideo	 Paratiromatosis en la articulación cricotiroidea
Cirugía en la reintervención	Hemitiroidectomía	Enucleación	Enucleación	Hemitiroidectomía	Resección de paratiromatosis
Motivo de la recidiva local	Resección incompleta	Resección incompleta	Fragmentación	Resección incompleta	Diseminación por rotura capsular

NLR: Nervio Laríngeo Recurrente; ATI: Arteria tiroidea inferior.

Fig. 1 – Summary of cases.

Despite advances in preoperative imaging tests and surgical management, persistence/recurrence of this disease still occurs in 2.5%–5.5% of sporadic HPTP.[2,3]

The main causes of HPTP-P are the absence of identification of the adenoma and undiagnosed or insufficiently treated multiglandular disease.[4] The causes of HPTP-R include recurrence of a parathyroid carcinoma, recurrence of the remnant, or metachronous hyperplasia in the context of familial hyperparathyroidism, or supernumerary glands.[5]

There are few publications in the literature about local recurrence of parathyroid adenomas, so we believe it is interesting to analyze our experience with this type of reoperations.

We conducted a retrospective study of reoperations for HPTP-P or HPTP-R from 1997 to 2019 in a reference Endocrine Surgery Unit. We defined HPTP-R as elevated serum calcium and PTH levels 6 months after a successful initial parathyroidectomy.

Patients with recurrence in the same location as the previously removed adenoma were identified, and those with hereditary hyperparathyroidism and carcinomas were excluded. We conducted a descriptive analysis of demographic variables, imaging tests prior to initial surgery and reoperation, the surgical technique used for both procedures, the time interval between them, and postoperative complications.

Seventy reoperations were performed, 33 of which had initially unidentified adenomas (47.1%), 18 multiglandular disease correctly/incorrectly treated in the first surgery (25.7%), 14 double adenomas (20%) and 5 local recurrence (7.1%).

The 5 local recurrences were women with a mean age of 53 ± 8 years who underwent resective surgery for a histologically confirmed sporadic adenoma and had maintained postoperative normocalcemia. The mean interval between both interventions was 10.6 ± 7 years. Previously, a bilateral cervical exploration had been performed in two patients, while a selective approach was used in three. Reoperations consisted of two hemithyroidectomies for intrathyroid adenomas, two enucleations, and one atypical resection for paratiromatosis/parathyroid disease; in all cases, parathyroid tissue with no malignancy criteria was confirmed in the histology study. Incomplete resection (4 cases) and local seeding due to probable capsular rupture were identified as the causes of local recurrence (Fig. 1).

Intraoperative PTH (PTHio) was determined in the three most recent reoperations, meeting the Miami criteria. One patient presented transient recurrent paralysis after a loss of segmental signal during neuromonitoring due to adhesion of the adenoma to the RLN/NLR. None of the cases presented postoperative hypocalcemia. After reoperation, all the patients remained asymptomatic and had normocalcemia during follow-up.

Local recurrence of a parathyroid adenoma after successful parathyroidectomy is rare. The classic study by Fraker et al.[6] reported 11 benign local recurrences among 108 reoperated patients, 4 for HPTP-P and 7 for HPTP-R. In our study, the prevalence was similar, with only 7.1% of reoperations due to a locally recurrent adenoma, all of them due to HPTP-R. Other authors report a higher prevalence, such as the 17.4% of the pioneering publication by Rattner et al.[7]

Causal mechanisms for local recurrence that have been described include parathyromatosis/Parathyroid disease due to violation of the parathyroid capsule, or incomplete excision leaving a portion *in situ*, as in partially intrathyroid adenomas, secondary to cell implantation after capsular disruption or hyperplasia of residual tissue hyperplasia.[6,7] In this sense, and given our findings, a hemithyroidectomy could be considered. On the other hand, local recurrence is a hallmark of parathyroid carcinoma, so a high index of suspicion must be maintained

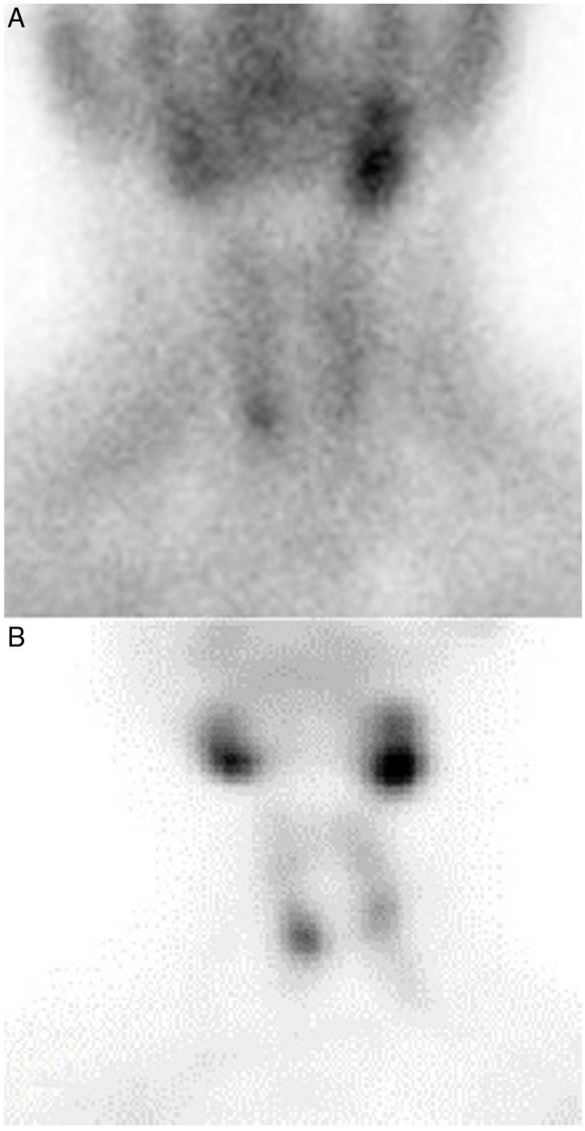


Fig. 2 – Scintigraphy of preoperative localization for the first surgery (A) and before the re-operation (B).

intraoperatively and local invasion or metastatic nodes must be ruled out histologically.

The mean interval between initial surgery and reoperation was greater than 10 years, which is consistent with previous publications[7] with a range between 8 and 23 years. Therefore, in a late recurrence after initial successful surgery, we must consider a benign local recurrence.

In the present study, the preoperative scintigraphies showed identical images between the initial surgery and the reoperation (Fig. 2).

This coincidence, not previously described, would allow us to suspect local recurrence and could have implications for planning and surgical approach. In our hospital, the lateral approach was chosen, which makes it possible to perform a hemithyroidectomy for partially/totally intrathyroid adenomas in which enucleation may not be effective. In the publication by Ros et al[8] of 16 intrathyroid parathyroid adenomas, two local recurrences were found in the three patients treated with enucleation.

The determination of PTHio could be especially important in reoperations.[1,9] Irvin et al[10] compared patients with and without PTHio monitoring, observing an increase in the success rate of reintervention from 76% to 94%, respectively.

Although the morbidity derived from parathyroid reexaminations has decreased in recent decades,[9] there is an increased risk of postoperative recurrent paralysis and hypocalcemia.[1] Intraoperative neuromonitoring is especially useful in relapses of the upper gland, closely related to the terminal segment of the NLR/RLN, where it tends to branch and is more vulnerable.

As conclusions, local recurrence after parathyroidectomy due to benign non-familial primary hyperparathyroidism is a rare cause of recurrence and it should be suspected if the recurrence is late, the preoperative imaging tests in both surgeries coincide and a capsular rupture or partially intrathyroid adenoma is described in the first surgery. Hemithyroidectomy should be considered for partially/totally intrathyroid adenomas in the initial surgery and at reoperation. Reoperation for primary hyperparathyroidism is challenging and should be carried out by experienced surgeons at high-volume hospitals.

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Strangle rectal prolapse: Emergency perineal rectosigmoidectomy☆

Prolapso rectal incarcerado: rectosigmoidectomía perineal urgente

Rectal prolapse is defined as a full-thickness protrusion of the rectal wall through the anal canal. It commonly occurs in elderly women due to weakness of the pelvic floor muscles, and it is uncommon in young men.[1]

Rectal prolapse is differentiated between 3 clinical entities: mucosal prolapse (partial or pseudoprolapse), internal prolapse (rectal intussusception) and total prolapse (complete or true).[2] Mucosal prolapse is generally the result of injuries such as hemorrhoids or polyps. Intussusception can be a full or partial thickness disorder, but the tissue does not extend beyond the anal canal, unlike total prolapse.

The condition usually develops progressively: it is initially spontaneously reducible, then manually reducible, and finally irreducible. At any stage, it can be complicated by incarceration or strangulation, which are very rare.

Incarcerated rectal prolapse is a surgical emergency,[3] and urgent perianal rectosigmoidectomy is the treatment of choice in these cases.[4]

We present the case of a 42-year-old male with a history of erectile dysfunction and rectal prolapse secondary to a traumatic burst fracture of the L4 vertebral body 20 years earlier. In the context of admission for AMI, the patient complained of discomfort due to not having practiced regular manual reduction of the prolapse. He presented a complete rectal prolapse of 20 cm, with edematous, violaceous mucosa and a surface that appeared to have chronic ulceration (Fig. 1).

After the failure of all conservative reduction procedures, hyperosmolar compresses, massage, and Trendelenburg under general anesthesia, we performed emergency perineal rectosigmoidectomy (Altemeier procedure).

A complete rectal wall incision was made 2–3 cm from the dentate line. The mesorectum and mesosigmoid vessels were controlled with a high-energy source; 15 cm of the prolapsed rectum were resected (Fig. 1), and coloanal anastomosis was created manually (Fig. 2). We did not perform associated levator repair or colostomy.

The patient's evolution was satisfactory, with no digestive or cardiological complications, and he was discharged on the 5th postoperative day. At the initial follow-up office visit, he reported correct continence and no recurrence.

There is still debate about the pathophysiological mechanism of rectal prolapse, but chronic abdominal strain is present in most cases. The most common form is the chronic course of the disorder, which is studied with diagnostic tests that include sigmoidoscopy, videodefecography, endoanal ultrasound, and anal manometry. In the context of incarceration, diagnostic tests are omitted since urgent surgical treatment is required.

Surgical treatment seeks to correct the anatomy of the prolapse, restore continence, and improve constipation and evacuation. Classically, 2 approaches are described (perineal and abdominal) for fixation, intestinal resection, or plication. The choice of technique is made based on the clinical and functional characteristics of the patient.

In urgent situations, when the prolapse cannot be reduced manually, certain techniques can help the intestine return to its anatomical position. Sedation, Trendelenburg position, and

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