INTRODUCTION

The traditional treatment for low rectal carcinomas has been radical excision, through either abdominoperineal amputation or very low anterior resection. Both techniques present non-negligible morbidity rates, with
urinary and sexual dysfunctions in at least 15% of patients. In abdominoperineal excisions colostomy will be permanent. In low anterior resections anastomotic leakage may occur up to 15% of cases, thus resulting in the use of protective ileostomies; in addition, a significant number of patients will experience defecatory urgency and perianal soiling as a result of incontinence (1-5). All these facts have stimulated the quest for more preservative procedures such as local excision, electrofulguration, endocavitary radiation, and lasertherpay. The initial application of these techniques was for high-risk patients who could not undergo radical surgery. No significant increase in recurrence rates was observed (6-8). Thus, endoanal local resection, which has the comparative advantage over the already-mentioned techniques that a specimen for histopathological analysis and appropriate staging may be obtained, gained a space in the treatment of rectal cancer confined to the wall. At present it is considered that 3 to 5% of these patients can be treated with this procedure (9-11). Selection criteria must include the following conditions: cephalic limit of the tumor at less than 7 cm from the anal verge, tumor diameter not larger than 5 cm, no adhesion to deep planes, no related lymph nodes, histological grade either well or moderately differentiated, and negative staging for local or remote disease (9,12,13). The study of the pathological specimen allows to determine penetration extent (T), and therefore will predict which patient will receive chemoradiotherapy when considering whether tumor penetration exceeds the submucosal layer and/or whether there is vascular or lymphatic permeation, and tumors invading perirectal fat will have to undergo radical resection (6,12,13).

The objective of the present study was the evaluation of long-term results based on local recurrence and disease-free survival rates.

**MATERIAL AND METHOD**

During the period between October 1985 and September 2003 we treated 209 patients carrying low rectal cancers. Twenty-one of them (10%) had a locally and completely extirpated tumor through the transanal route. Malignant villous adenomas, “in situ” carcinomas, and palliative resections were excluded. There were 14 females and 7 males, with ages ranging from 34 to 80 years (average 61 years). At least a thirty-month follow-up was needed. Only 8 patients were studied with rectal EUS, and 7 were assessed with pelvic CT scans, and such patients consisted of those assessed and treated from 1994, when such diagnostic procedures were already available within the Public Healthcare Services of Chile. Of such 12 patients 3 were stratified as T1 and 9 were stratified as T2. All tumors were movable, 11 were protruded, and 10 were ulcerative.

In 14 of them the size was smaller than 3 cm, and 7 measured between 3 and 5 cm; 13 of them had posterior involvement, 4 had anterior involvement, and 1 was semi-circumferential. All tumors were moderately differentiated.

Fourteen out of the 15 patients who had preoperative CEA values had less than 5 ng/ml.

According to our protocols no patient was treated with neoadjuvant chemoradiotherapy, as neoplastic lesions were mobile and rectal wall penetration was only partial.

Follow-up was complete in August, 2006 or stopped at a well-known date of decease, with an average 75-month observation period. The development of local recurrence and its relation with staging, conduct in case of recurrence, and 5-year survival were evaluated.

**RESULTS**

Two postoperative complications were documented: an early hemorrhage that was plugged, and a delayed one that required hospitalization and transfusion; the wound was closed in the first case and open in the second. Neither reoperations nor operating mortality were registered.

Histopathological studies revealed invasion not beyond the submucosa (T1) in 4 cases, of the muscular layer (T2) in 13, and of perirectal fat (T3) in 4.

Three such patients were in stage uT2N0, and 2 showed no involvement of perirectal fat in the CT scan. Six T2 and 3 T3 patients had access to chemoradiotherapy. No T3 had radical surgery. Four patients (19%) had local or regional recurrence, corresponding to 3 T2 and one T3 cases; only 3 of them had received adjuvant therapy. Recurrence occurred between month 17 and 27 after local resection.

There were 2 cases of remote metastases (lung, brain); 2 additional cases presented with a second primary cancer (bladder, prostate).

Twenty patients were alive after 5 years (95.2%), and 16 are presently alive and without manifest disease.

**DISCUSSION**

Ten percent of all rectal carcinomas treated by our group had access to this technique, a higher index than recommended by various centers (4). This is due to the inclusion of tumors bigger than 3 cm, and to the presence of ulcerative tumors that fulfilled all other condi-
tions already indicated. Nevertheless, it conveys a greater risk of recurrence.

Local recurrence after local excision may be due to the microscopic residual persistence of neoplastic cells in the primary site, or to the presence of involved lymph nodes in the mesorectum, which are not removed by this technique. The risk of metastatic damage is directly related to the parietal penetration of the tumor especially in the submucosal layer (14,15). Despite the valuable information provided by rectal EUS regarding rectal wall penetration and damaged lymph nodes, its accuracy index does not exceed 80% (15,16); and the latter was supported by the understaging of 3 patients in the present study.

Reported rates of local recurrence in the last two decades range from 0 to 44% (9,16-19). Tumor size and penetration, venous and lymphatic vessel invasion, and ulcerative morphology constitute factors that impact on local recurrence and disease-free survival (20). Our 4 cases of recurrence correspond to 4-cm-wide ulcerative tumors that penetrated down to muscle layers. Another risk factor is the removal of the tumor in several fragments, a condition that should not be regarded as curative and that, on the contrary, should prompt immediate radical surgery (19). There have been no reports of local failures or metastatic disease from our T1 patients treated with local resection; the latter is in contrast with the discouraging results reported during the past few years, which describe recurrence rates of up to 29% (21-23).

In most retrospective studies in T2 patients treated with co-adjuvant therapy recurrence is not higher than 2% (8,9,15) versus 15-20% for those who were only resected (10,24,25); only 1 of 7 patients not treated with chemoradiotherapy had a local failure. Nevertheless, this result is not enough to change criteria regarding a well-combined treatment (7).

The appropriate management of tumors with perirectal fat involvement (T3) is radical surgery (6,10,26), but new studies show encouraging results regarding adjuvant therapies, as shown with T2 cases (14). These options must be discussed with the patient, who should be fully informed about the risks of recurrence and the sequel of either treatment. In our experience there were 2 patients who, properly informed, refused the possibility of a definitive colostomy and were treated with chemoradiotherapy with excellent results during a 6- and 4-year follow-up.

In all, 95.2% for 5-year survival is higher than the rate for patients with similar stages undergoing radical surgery (27,28). A case of pulmonary metastasis in the 7th year confirms the convenience of prolonged and close surveillance.

CONCLUSIONS
A transanal local excision of some low rectal carcinomas may be considered a valid option due to very low morbidity and mortality rates, preservation of anal function, absence of urinary and sexual sequels, and oncological results similar to those of patients undergoing radical surgery.

However, these good results will depend on strict compliance with treatment protocols as established for each stage. Tumors without submucosal involvement may be treated with only local resection; those invading the submucosa will require complementary chemoradiotherapy. Should a previous study show invasion of the perirectal fat, patients must not undergo this technique. If there is a new finding in the study of the resected specimen, each case should be analyzed regarding the appropriateness of radical or adjuvant treatment.

REFERENCES
20. Hager Th, Gall FP, Harmanek P. Local excision of cancer of the...