

View from Beneath—Pathology in Focus

A long-standing cystic lymph node metastasis from occult thyroid carcinoma—report of a case

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Abstract

The authors describe a patient with a cervical cystic mass present for 14 years which proved to be a cystic metastasis from a papillary carcinoma of the thyroid gland. This is probably the first case report of a long-term lateral cervical cyst caused by an occult thyroid carcinoma.

Introduction

Lateral cervical cysts are usually benign lesions. Yet it is not rare to find lateral cervical cysts caused by carcinomas from the branchial cleft cysts, the oro-nasopharynx, thyroid, lungs and major salivary glands (Compagno *et al.*, 1976). The overwhelming majority of the cysts are metastases of epidermoid carcinomas in the oro-nasopharyngeal area. Metastatic carcinomas in nodes can cause subcortical liquefaction resulting in a discrete fluid-filled neck mass. Diagnostic procedures (namely, fine-needle aspiration, ultrasound and thyroid scans) may fail to elucidate the nature of such a lateral cervical lesion (Wallace and Betsill, 1984; Loughran, 1991). The medical and personal history may also be misleading. It is usually necessary to excise the cystic mass to confirm the diagnosis.

Case report

A 37-year-old woman presented with a 14-year history of an enlarging cervical mass. Apart from a spherical mass 4 cm in

diameter located at the right upper anterior ridge of the sternocleidomastoid muscle, no pathology was revealed by a complete otolaryngological examination. No mass was palpable in the thyroid gland area. The cystic nature of the spherical, lateral cervical mass was confirmed by ultrasound. Fine-needle aspiration was interpreted as 'no malignant change'. Clinically, it was thought to be a branchial cyst. The neck was explored surgically, demonstrating a 4 × 2 cm cystic mass on the carotid sheath (Fig. 1), filled with coffee-ground fluid.

Histological examination showed a cyst with a thick fibrotic wall lined by atypical cuboid epithelium. A focal papillary carcinoma was found in the wall and the cavity (Figs. 2 & 3). Focal lymphoid tissue was also present in the subepithelial region. A thyroid scan was performed and a cold nodule (1.4 × 1.3 cm) was found in the right lobe. This was a papillary carcinoma (1.2 × 0.6 × 0.5 cm) (Fig. 4) which was removed by a near total thyroidectomy and regional neck dissection. The excised lymph nodes were free of tumour. The final diagnosis was a papillary carcinoma of the thyroid with metastasis to a cervical lymph node causing cystic degeneration.

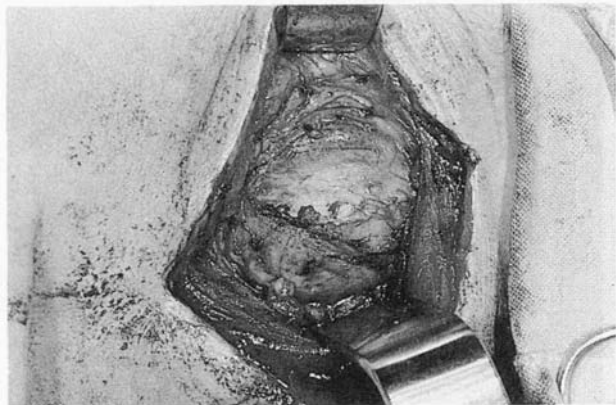


FIG. 1
4 × 2 cm cystic mass on carotid sheath.

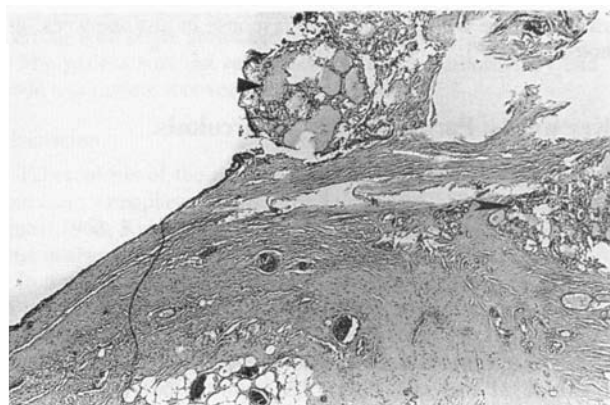


FIG. 2
Metastatic papillary carcinoma in the wall (long arrow) and cavity (small arrow) of the cyst (×30).

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TABLE I
SUMMARY OF THE THYROID CARCINOMA SEEN AS LATERAL CERVICAL CYST

Reference	Sex	Age	Duration	Thyroid scan	FNA+	Content of cyst	Ultrasound	Surgery
Clinberg <i>et al.</i> (1982)	M	70	1 month	Nil*	(-)**	Brown liquid	Nil	TT+ND‡
Tovi and Zirkon (1983)	F	26	Slow growing	Normal	Nil	Brown fluid	Nil	TT+ND
	F	48	3 Months	Nil	Nil	Caseous material	Nil	TT+ND
	F	30	Nil	Normal	Nil	Nil	Cystic	TT+ND
	F	27	1 year	Normal	Nil	Colourless fluid	Cystic	TT+ND
Wallace and Betsill (1984)	M	62	5 days	Cold nodule	(-)	Brown murky fluid	Cystic	TT+ND
	M	32	Acute	Normal	Nil	Thick-brown fluid	Cystic	TT+ND
	F	48	8 weeks	Normal	Nil	Thick-brown fluid	Nil	ST+ND‡‡
	M	45	1 year	Patch uptake	Nil	Dark-brown fluid	Cystic+solid	ST+ND
Santini <i>et al.</i> (1989)	M	36	2 years	Normal	Nil	Nil	Nil	TT
Loughran (1991)	M	19	1 week	Normal	Nil	Nil	Cystic	TT+ND

Nil*, No data available.
 (-)**, No malignant cells.
 TT+ND‡, Total thyroidectomy and neck dissection.
 ST+ND‡‡, Subtotal thyroidectomy and neck dissection.
 FNA+, Fine-needle aspiration.

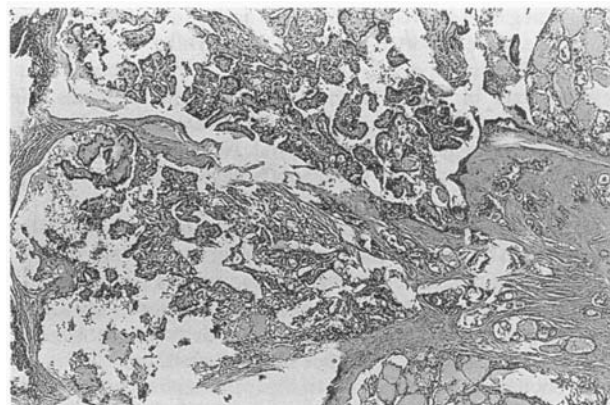


FIG. 3
Metastatic papillary carcinoma in the wall of the cyst (×75).

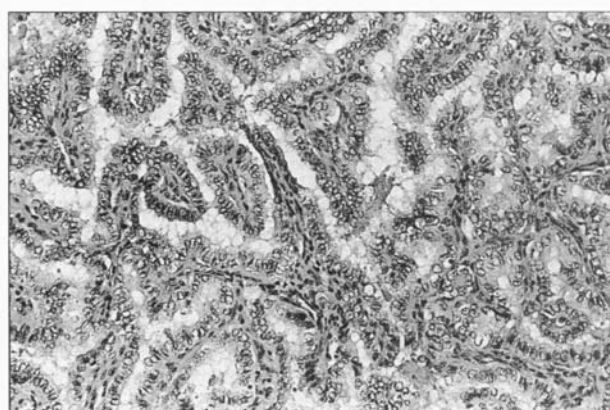


FIG. 4
Papillary carcinoma in the right thyroid lobe (×150).

Discussion

Malignant lateral cervical cysts can be caused by primary and metastatic tumours. The diagnosis of primary branchiogenic carcinoma remains controversial since Martin *et al.* (1950) described the diagnostic criteria. Metastatic cervical cystic tumours arise mainly from the upper aerodigestive tract, the thyroid and salivary glands. The period between the occurrence of a metastatic cystic cervical node and the primary tumour may be as long as 11 years and the response to treatment is favourable (Micheau *et al.*, 1974). Occult carcinomas with cystic metastases seem to run a longer course than those with solid metastases.

Papillary carcinomas are the most common variety of thyroid malignancy. They account for 68 per cent to 74 per cent of all malignant thyroid tumours (Jensen *et al.*, 1990; Candy, 1991). Twenty five per cent of papillary carcinomas were classified as occult thyroid carcinoma, because they were less than 1.5 cm in size (Hubert *et al.*, 1980). Virtually all occult thyroid carcinoma were impalpable on physical examination. The clinical presentation was a mass in the lateral neck in 30 per cent of cases.

We uncovered 11 reported cases of lateral cervical cysts caused by thyroid carcinoma (Table I). The ratio of male to female was 6:5. The overall mean age was 40.3 years (range 19 to 70). The duration of the lesions varied from five days to two years. The long duration (14 years) of our case is uncommon. A striking feature of papillary carcinoma of the thyroid is the fact that both the primary tumour and the metastases may remain stationary for long periods (Meissner and Warren, 1982). Seventeen per cent of the patients had a thyroid mass for 10 years or longer (Friedman *et al.*, 1980). A long history of a cystic cervical mass does not eliminate the possibility of malignancy. It is acceptable that our patient had suffered with a metastatic lateral cervical cystic mass for 14 years.

False negative results in fine-needle aspiration of thyroid cystic lesions were reported as 8 per cent (Miller *et al.*, 1979) whereas Granstrom *et al.*, 1989 reported a 67 per cent false-negative rate in lateral cervical cysts. In the 11 cases we reviewed, fine-needle aspiration cytology was performed in two cases but no malignant cell was found. Negative results of fine needle aspiration cytology should not be regarded as an evidence of benign disease.

Normal thyroid scans were reported in 6 per cent of the patients with thyroid carcinoma (Friedman *et al.*, 1980); nearly 80 per cent of the cases we reviewed had normal thyroid scans. Thyroidectomy with conservative neck dissection is the treatment of choice for thyroid carcinomas with cystic metastases. The prognosis is favourable after surgical treatment.

In conclusion, it is important to stress that lateral cervical cystic tumours in adults are frequently associated with primary or secondary malignancy even if the mass has existed for more than 10 years. Careful history-taking, head and neck examination, fine-needle aspiration, thyroid scan and ultrasound may offer some help but have frequently been negative. Ultimately, surgical excision biopsy becomes necessary for diagnosis and surgeons should be prepared for a more radical procedure if a malignant neoplasm is revealed.

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