

Tamoxifen to treat urge-incontinence from an isolated bladder metastasis of a primary breast cancer

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KEY WORDS

breast cancer ► tamoxifen ► urge-incontinence

ABSTRACT

Objectives. Managing urge-incontinence after metastatic lobular carcinoma of the breast into the bladder.

Material and methods. Case report and review of the pertinent English language literature.

Results. Conservative management with tamoxifen resulted in clinical and partial radiological remission and the urge-incontinence disappeared.

Conclusion. A conservative mode of treatment is possible for metastatic lobular carcinoma of the breast into the bladder.

CASE REPORT

A 68-year old woman presented with urge-incontinence, resistant to anticholinergic therapy. Urinalysis revealed a urinary tract infection caused by *E. coli* and cytology showed several neutrophils, but no malignant cells. Despite treatment with ciprofloxacin, the urge-incontinence persisted. Ultrasonography revealed right hydronephrosis and thickening of the bladder wall. In addition a cystoscopy was performed, displaying abnormal tissue at the level of the trigon and on both sides of the bladder wall. Transurethral biopsies were obtained revealing tumor cells of unknown primary origin. The immunohistochemical studies disclosed positivity for CK7, estrogen and progesterone receptors compatible with metastatic lobular carcinoma of the breast. In 1989 the patient had undergone a right radical mastectomy and adjuvant radiotherapy for a lobular breast carcinoma pT1N0M0. Analysis of the family history revealed that her mother had pancreatic cancer; her father esophageal cancer and her daughter a teratoma of the ovary. Genetic analysis for gene mutations, including BRCA1, was negative. Further staging using positron emission tomography (PET)-CT displayed local recurrence in the right breast and confirmed the unique metastatic location at the level of the trigon. Treatment with tamoxifen, 20 mg daily, was started with progressive improvement of the urge-incontinence within 5 months. A follow-up PET-scan showed decreased intensity of the breast lesion and trigon lesion. Nearly 10 months after diagnosis the patient is in clinical and partial radiological remission and the urge-incontinence has dissipated, while she has no overt toxicities from treatment with tamoxifen.

DISCUSSION

The typical symptoms of urge-incontinence are frequent and urgent micturitions with incontinence. In most of the cases, no underlying cause is observed. However, when adequate behavioral attitude, pharmacological treatment and intense physiotherapy

do not lead to improvement of urge-incontinence, an underlying disease should be ruled out. Primary bladder cancer should be excluded with a cystoscopy.

Metastasis in the bladder occurs in 2% of all malignant disease and only 2.4% of these bladder metastases arise from a primary breast carcinoma [1]. Only a few cases of an isolated bladder metastasis of breast cancer have been reported [2–9].

Various therapeutic options have been employed in these cases. Isolated metastases of primary breast carcinoma to the bladder are mostly treated by systemic chemotherapy [2, 3, 7, 9]. In only two estrogen-receptor positive cases, successful hormonal treatment with tamoxifen has been reported. Soon et al. reported an 87-year old patient presenting with genuine stress incontinence as a first sign of breast cancer [5]. Unlike in our case, family history for breast cancer was positive. Choudhary et al. describe a patient with mixed incontinence, 18 years after an infiltrating ductal breast carcinoma [6]. In both cases, a cystoscopy with biopsy revealed a metastasis of the breast, positive for estrogen and progesterone receptors. Tamoxifen treatment resulted in improvement of the urinary symptoms. No estrogen-receptor negative cases treated with tamoxifen have been described.

In our case the patient suffered from a lobular subtype of breast cancer. Of the 19 cases with bladder metastases from breast cancer reviewed by Feldman et al. about one third had a lobular carcinoma subtype [10]. The two cases previously described as successfully treated by tamoxifen presented one patient with a history of lobular subtype and another with a ductal subtype. This current third case report describes tamoxifen as a successful treatment of urge-incontinence, due to an isolated bladder metastasis. In the advent of an unknown cancer history or inconclusive malignant history, we propose to take a biopsy and to look for the presence of estrogen receptors as this offers an opportunity for a well-tolerated treatment that can produce long-term disease control and allows a conservative approach with regard to the local treatment. Zagha et al. promoted a more invasive approach [4]. After discovering bladder metastasis of a primary breast cancer, they performed a partial cystectomy, followed by long-term treatment with fulvestrant.

CONCLUSION

There is no standard therapy to the rare occurrence of isolated bladder metastasis from breast cancer. This current case report describes tamoxifen as a successful treatment of urge-incontinence due to an isolated bladder metastasis.

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