ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26jun1809

Early Locoregional Recurrence After Mastectomy for Triple-Negative Breast Cancer with Ipsilateral Axillary Lymph Node Involvement: A Case Report

Maha Lhaloui[1]; Mustapha Benhessou[2]; Simohamed Ennachit[3]; Mohammed Elkerroumi[4]

[1]Contact Author:

[1,2,3,4]Mohammed VI Center for the Treatment of Cancers, Ibn Rochd University Hospital Center Casablanca, Morocco

Publication Date: 2026/07/04

Abstract : Triple-negative breast cancers are defined by the absence of hormonal receptor expression (estrogen and progesterone) as well as the lack of HER2 overexpression. Their marked tendency toward early relapse, combined with pronounced clinical and biological aggressiveness, confers a high metastatic potential and significant resistance to conventional therapies. This complexity underscores the need for management strategies grounded in a comprehensive understanding of their molecular biology.

Keywords: *Triple-Negative Breast Cancer, Chemotherapy, EGFR, PARP).*

How to Cite: Maha Lhaloui; Mustapha Benhessou; Simohamed Ennachit; Mohammed Elkerroumi (2026) Early Locoregional Recurrence After Mastectomy for Triple-Negative Breast Cancer with Ipsilateral Axillary Lymph Node Involvement: A Case Report. *International Journal of Innovative Science and Research Technology*, 11(6), 2324-2326. https://doi.org/10.38124/ijisrt/26jun1809

I. INTRODUCTION

Triple-negative breast cancers (TNBC) account for approximately 10–15% of all breast cancers but are disproportionately represented among women under 40 years of age, reaching up to 30% of cases [1]. At the localized stage, the risk of early recurrence is high, with a median relapse interval estimated at 13 months. In the metastatic setting, the lungs, liver, and brain are the most frequently affected organs [2]. Overall survival, averaging 14 months, remains markedly inferior to that observed in other histological subgroups, where the median ranges between 43 and 50 months [3]. Morphologically, certain histological variants are associated with a favorable prognosis, such as adenoid cystic carcinoma and low-grade adenosquamous carcinoma, whereas others, including metaplastic carcinoma, display pronounced aggressiveness [4]. Immunohistochemistry further refines the analysis by quantifying Ki67, a mitotic proliferation index. Elevated Ki67 levels are linked to poor prognosis, although they may predict enhanced responsiveness to neoadjuvant chemotherapy. Additional subtypes have been identified, including androgen receptor–positive tumors, epidermal growth factor receptor (EGFR)–expressing tumors, and basal-like profiles characterized by cytokeratins CK5/6, CK14, and CK17. These basal-like phenotypes represent 75–80% of cases and are generally associated with increased aggressiveness [5]. In patients harboring BRCA1 or BRCA2 mutations, carcinogenesis is attributed to defective DNA repair mechanisms resulting from homologous recombination deficiency [6].

II. PATIENT OBSERVATION

A 33-year-old patient was followed for an invasive breast carcinoma of no special type, graded SBR3, triple-negative, with a proliferation index (Ki-67) of 80%. The tumor was multifocal and multicentric, staged T3N1M0. She underwent neoadjuvant chemotherapy followed by a left Patey mastectomy. After seven months of follow-up, the patient presented with a nodule on the mastectomy scar. Clinical and paraclinical evaluation was performed, leading to re-excision of the tumor bed and exploration of the ipsilateral axillary region.

➢ *Clinical Examination:*

- Left breast: A 2cm nodule was identified along the medial border of the mastectomy scar.
- Right breast: No palpable nodule
- Lymph node areas: 1cm left axillary lymphadenopathy.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26jun1809

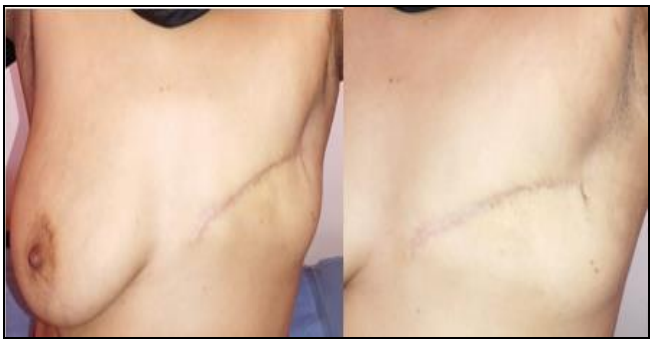

Fig 1 Clinical Examination

Fig 2 Mammography of the Right Breast

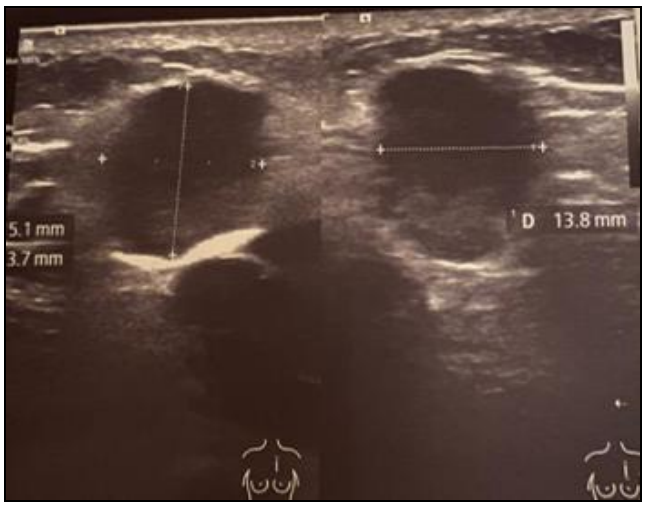

Fig 3 Breast Ultrasound Findings

Imaging revealed a malignant-appearing lesion measuring 15 × 13.7 × 13.8 mm, associated with a benign-appearing lymphadenopathy measuring 15.5 × 13 mm.

- *Staging Investigations:*
  Demonstrated no evidence of secondary localization.

➢ *Histopathological Examination:*
Histopathological examination confirmed an invasive triple-negative breast carcinoma, grade 3, with clear surgical margins. Axillary dissection revealed one positive lymph node out of four examined.

III. DISCUSSION

Triple-negative breast cancers are associated with a poor prognosis. Several risk factors have been identified: hormonal (early menarche, late menopause, hormonal contraception, and hormone replacement therapy), reproductive (late first pregnancy, absence of breastfeeding or breastfeeding for less than six months), and environmental (alcohol consumption, obesity, and exposure to ionizing radiation) [7]. Genetic predispositions account for approximately 5–10% of breast cancers. Mutations in BRCA1/2 confer the highest risks, with breast cancer incidence reaching 72% [8]. The PALB2 gene is associated with an intermediate risk (53%), while RAD51C/D mutations approximately double the risk of breast cancer [9]. Rarer genes such as TP53 (Li-Fraumeni syndrome, breast cancer risk 40–85% by age 70), PTEN (Cowden syndrome, breast cancer risk 77–85% by age 70) [11–13], and CDH1 (lobular breast cancer risk 39–52% by age 75, diffuse gastric cancer ≈25%) require individualized management. Clinically, French guidelines recommend intensified radiological surveillance from age 30 (annual MRI and mammography), bilateral prophylactic mastectomy reducing risk by more than 90% [9], and bilateral prophylactic salpingo-oophorectomy at age 40 for BRCA1 carriers, deferred to age 45 for BRCA2 carriers. Importantly, BRCA1/2 mutation status does not contraindicate hormonal contraception or menopausal hormone therapy [10]. Data regarding locoregional control remain inconsistent: some studies suggest an increased risk [11–13], whereas others report no significant difference [14–17].

IV. CONCLUSION

Scientific research demonstrates that the understanding of biological and clinical mechanisms cannot be confined to the isolated analysis of data. It requires an integrated approach that considers prognostic factors, therapeutic strategies, and the impact on patients' quality of life. Any conclusion must therefore move beyond mere statistical observation to embrace a broader reflection: one that emphasizes individualized care, the balance between efficacy and tolerance, and the continuous adaptation of medical practice to advances in knowledge.

➢ *Ethics Commitee Authorization:*
Our institution does not find any conflict of ethics commitee.

➢ *Author Contribution :*

- Maha LHALOUI: paper writing and picture editing.
- Mustapha BENHESSOU, Simohamed ENNACHIT, Mohammed ELKERROUMI: Bibliography, written direction.

➢ *Guarantor*
Maha Lhaloui.

ISSN No:-2456-2165 https://doi.org/10.38124/ijisrt/26jun1809

- *Research Registration Number*
  No applicable data.

- *Conflicts of Interest Statement:*
  No conflict of interest have been announced by the authors for to this research.

REFERENCES

[1]. Azim HA, Partridge AH. Biology of breast cancer in young women. Breast Cancer Res 2014;16:427. http://dx.doi.org/10.1186/s13058-014-0427-5.

[2]. Lin NU, Claus E, Sohl J, Razzak AR, Arnaout A, Winer EP. Sites of distant recurrence and clinical outcomes in patients with metastatic triple-negative breast cancer: high incidence of central nervous system metastases. Cancer 2008;113:2638–45. http://dx.doi.org/10.1002/cncr.23930.

[3]. Deluche E, Antoine A, Bachelot T, Lardy Cleaud A, Dieras V, Brain E, et al. Contem porary outcomes of metastatic breast cancer among 22,000 women from the multicenter ESME cohort 2008–2016. Eur J Cancer 2020;129:60–70. http://dx.doi.org/ 10.1016/j.ejca.2020.01.016.

[4]. Herrera Juarez M ,Tolosa Ortega P , Sanchez de Torre A , et al . Biology of the triple-negative breast cancer: immunohistochemical, RNA, and DNA features . Breast Care (Basel) 2020 ; 15 (3) : 208 – 16 .

[5]. Foulkes WD , Smith IE ,Reis-Filho JS . Triple-negative breast cancer . N Engl J Med 2010 ; 363 (20) : 1938 – 48 .

[6]. Gonçalves A , Bertucci A ,Bertucci F .PARP inhibitors in the treatment of early breast cancer: the step beyond? Cancers (Basel) 2020 ; 12 (6) : 1378 .

[7]. Tome 4 > n86 > décembre 2023 10.1016/j.lpmfor.2023.10.019 © 2023 Elsevier Masson SAS. Tous droits réservés.

[8]. Yang X, Song H, Leslie G, Engel C, Hahnen E, Auber B, et al. Ovarian and breast cancer risks associated with pathogenic variants in RAD51C and RAD51D. J Natl Cancer Inst 2020;112(12):1242–50.

[9]. Hartmann LC, Lindor NM. The role of risk reducing surgery in hereditary breast and ovarian cancer. N Engl J Med 2016;374 (5):454–68.

[10]. Thésaurus-Femmes porteuses d'une mutation de BRCA1 ou BRCA2/Détection précoce du cancer du sein et des annexes et stratégies de réduction du risque, Collection recommandations et référentiels, INCa, avril 2017.

[11]. Banerjee S, Reis-Filho JS, Ashley S, Steele D, Ashworth A, Lakhani SR, et al. Basal-like breast carcinomas: clinical outcome and response to chemotherapy. J Clin Pathol 2006;59:729–35.

[12]. Abdulkarim BS, Cuartero J, Hanson J, Deschеˆnes J, Lesniak D, Sabri S. Increased risk of locoregional recurrence for women with T1-2N0 triple-negative breast cancer treated with modified radical mastectomy without adjuvant radiation therapy compared with breast-conserving therapy. J Clin Oncol 2011; 21:2852–8.

[13]. Voduc KD, Cheang MCU, Tyldesley S, Gelmon K, Nielsen TO, Kennecke H. Breast cancer subtypes and risk of local and regional relapse. J Clin Oncol 2010; 10:1684–91.

[14]. Kyndi M, Sorensen FB, Knudsen H, Overgaard M, Nielsen HM, Overgaard J. Danish Breast Cancer Cooperative Group. Estrogen receptor, progesterone receptor, HER-2, and response to postmastectomy radiotherapy in high-risk breast cancer: the danish breast cancer cooperative group. J Clin Oncol 2008;26(9):1419–26.

[15]. Dent R, Hanna WM, Trudeau M, Rawlinson E, Sun P, Narod SA. Time to disease recurrence in basal-type breast cancers. Cancer 2009;115(21):4917–23.

[16]. Rodriguez-Pinilla S, Sarrio D, Honrado E, Hardisson D, Calero F, Benitez J, et al. Pronostic significance of basal-like phenotype and fascin expression in node negative invasive breast carcinomas. Clin Cancer Res 2006;12:1533–9.

[17]. Foulkes WD, Smith IE, Reis-Filho JS. Triple-negative breast cancer. NEJM 2010;363:1938–48.