



CASE REPORT

Neuroendocrine carcinoma of the breast

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Summary Primary breast neuroendocrine carcinoma (BNEC) is rare. High-grade BNEC, such as small cell carcinoma and large cell carcinoma, sometimes exhibits specific histological features, and is easily diagnosed. Low-grade solid BNEC, however, may demonstrate no specific neuroendocrine features on histological examination, which serve to distinguish it from conventional invasive carcinoma. Here, we present the case of a 46-year-old woman who was suspected of having BNEC. Suspicion was initially aroused by crush artifact during the time of frozen section. Subsequent immunohistochemistry established the diagnosis of solid BNEC according to the criteria of the WHO definition.

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1. Introduction

In 2003, the World Health Organization (WHO) defined breast neuroendocrine carcinoma (BNEC) as a unique category of breast cancer. The diagnosis of BNEC required immunohistochemical (IHC) expression of neuroendocrine (NE) markers in more than 50% of breast tumors. The WHO also divided the BNECs into 3 subclasses, consisting of solid neuroendocrine carcinoma, small/oat cell carcinoma and

large cell neuroendocrine carcinoma.¹ Primary BNEC is a rare breast cancer, and the reported data vary from < 0.1% to 5% of all breast cancers.^{2–6} BNECs have multidirectional differentiation in morphology, including mucinous differentiation, overlapping in expression usual types of breast carcinoma.⁴ Here we present a case of solid BNEC diagnosed based on subtle histological characteristics and specific IHC expressions.

2. Case report

A 46-year-old woman, who had smoked for 20 years, had a right breast lump for 2 weeks. She underwent breast ultrasonography, which showed a heterogenous and hypo-echoic mass about 2 cm in diameter, without calcification

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