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Dermo-glandular flap for treatment of recurrent periductal mastitis

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ABSTRACT

Background: Recurrent periductal mastitis (PDM) is usually refractory to medical treatment and normally requires surgical intervention or even mastectomy. This study aimed to evaluate the effectiveness and safety of extended excision with transferring a random breast dermo-glandular flap (BDGF) in the treatment of severe PDM.

Materials and methods: Between January 2010 and December 2011, 47 patients with recurrent PDM were consecutively and prospectively hospitalized for elective extended excision. A random BDGF was harvested from the ipsilateral breast tissue overlying the pectoralis major muscle and transferred to resurface the breast tissue defect. The donor site wound was closed using interrupted sutures. Main outcome measures included flap survivability, surgical morbidities, and follow-up cosmetic outcome.

Results: All flaps survived uneventfully and all wounds healed by primary intention. PDM recurred in two patients (2/47, 4.3%) and required second-look surgery. The cosmetic outcome was self-evaluated to be excellent in 31.9% (15/47) of patients, good in 36.2% (17/47), acceptable in 21.3% (10/47), and poor in 10.6% (5/47), respectively. The donor site wounds healed uneventfully with minimal scarring.

Conclusions: Extended excision with transferring BDGF is an effective, safe treatment modality for recurrent PDM with a low-risk morbidity and favorable cosmesis.

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1. Introduction

Periductal mastitis (PDM), also called Zuska disease, is an uncommon benign breast disorder first described by Zuska in 1951 [1]. The etiology of PDM remains unclear, but PDM is pathologically characteristic of obstructed lactiferous ducts. The clinical manifestations of PDM are variable, including nipple discharge, deep breast mass, recurrent subareolar abscess, and mammary duct fistula [2–5].

In addition to sensitive antimicrobial therapy, definitive surgical excision includes removal of the pathologic ducts, retroareolar fibroglandular tissue, and surrounding inflamed tissues. However, PDM is subject to recurrence even after definitive surgery in some cases, which is reported to range from 9%–28% [4,6,7]. Some recurrent cases may fail repeated courses of antimicrobial treatment and standard excision; therefore, further extended excision or even mastectomy is required to achieve the definitive treatment outcome. This

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additional surgery results in an increased morbidity and unfavorable cosmetic outcome.

Random breast dermo-glandular flap (BDGF) is a pedicled flap containing the cutaneous, subcutaneous, and mammary gland tissues, which is nourished by a number of unnamed arterioles. This flap has been used for breast reconstruction after breast reduction for macromastia. This study aimed to evaluate the effectiveness and safety of extended excision with transfer of a random BDGF in the treatment of recurrent PDM within a 2-y follow-up period.

2. Materials and methods

2.1. Study protocol and design

The study protocol was approved by the Institutional Review Board at Peking Union Medical College Hospital in accordance with the latest version of the Declaration of Helsinki. One hundred thirty-one female patients were consecutively and

prospectively hospitalized at our breast surgery unit for treatment of recurrent PDM between January 2010 and December 2011. The inclusion criteria were as follows: at least 18 y old; suffering from chronic recurrent PDM with complicating mass, abscess, or fistula for at least 1 mo after repeated courses of sensitive antimicrobial therapy; afflicted with recurrence after at least one attempt of surgical excision; and scheduled for elective extended excision and simultaneous flap repair due to an oversized breast defect after debridement. The exclusion criteria were as follows: being pregnant or lactating; with complicating acute infectious mastitis; with breast cancer; or rejecting to participate in this study. All patients volunteered to give informed consent before participation in this study.

2.2. Extended excision

A clinical hematology test was performed to exclude any active infection. Mammography (Fig. 1A and B) and breast ultrasonography (Fig. 1C) or magnetic resonance imaging

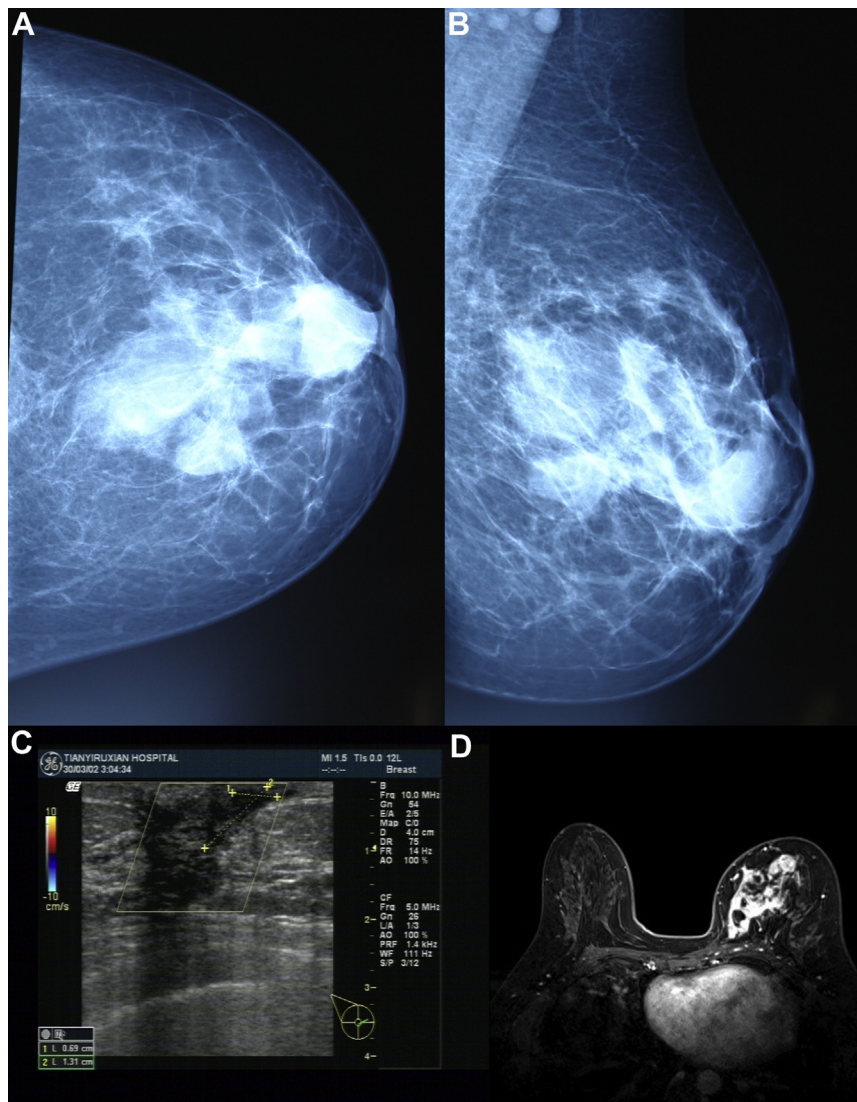


Fig. 1 – Axial (A) and (B) mediolateral oblique mammography, ultrasonography (C), and magnetic resonance imaging (D) of PDM.

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