

# Creation of an intermammary sulcus in congenital synmastia

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## ABSTRACT

Synmastia is a condition where both breasts appear conjoint without an intervening intermammary sulcus. This is usually the result of technical complications during breast implant surgery caused by over-dissection of the medial pocket over the sternum in the subglandular plane, or by an over-division of the pectoralis muscle origin along the sternum in a submuscular plane. As a congenital problem, this is very rare with only a single previous report of an attempt to correct this anomaly. We report a rare case of synmastia in a 19-year-old Indian woman. She had no previous surgery or family history of the condition. Vertical-scar reduction mammoplasty was performed for the hypertrophic breasts. Using the same access, the synmastia was corrected. This approach avoided incisions on the sternum, which is one of the keloid-prone sites on the body. Eight months postoperation, the intermammary sulcus was maintained.

**Keywords:** breast reconstruction, congenital synmastia, intermammary sulcus, mammoplasty, synmastia

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## INTRODUCTION

Synmastia is a condition where both breasts appear conjoint without an intervening intermammary sulcus. This is usually the result of technical complications during breast implant surgery caused by over-dissection of the medial pocket over the sternum in the subglandular plane, or by an over-division of the pectoralis muscle origin along the sternum in a submuscular plane. Over-sized implants may also contribute to this condition. As a congenital problem, this is very rare with only a single previous report of an attempt to correct this anomaly<sup>(1)</sup>. We report a rare case of congenital synmastia in a 19-year-old Indian woman that was successfully corrected simultaneously with a vertical-scar reduction mammoplasty.

## CASE REPORT

A 19-year-old Indian woman was referred for the correction of synmastia. The patient had a previous history of sinus infection in the presternal supraglandular area. This resolved with antibiotic treatment. Ultrasonographical and mammographical examinations showed that the breasts were connected by fatty tissue. There was no other medical or family history of note. Physical examination revealed the absence of an intermammary sulcus (Figs. 1a–c).

A vertical-scar reduction mammoplasty was first performed with markings for incisions (Fig. 2a). A layer of connective tissue could be seen separating

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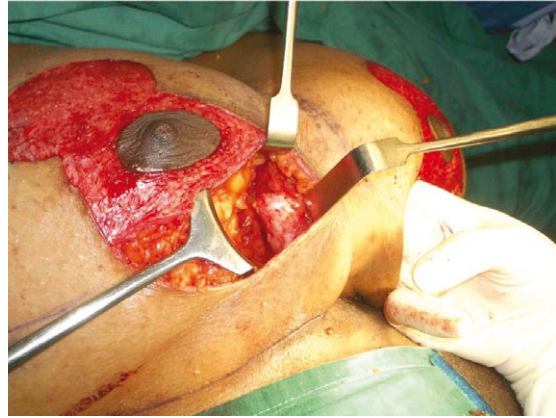
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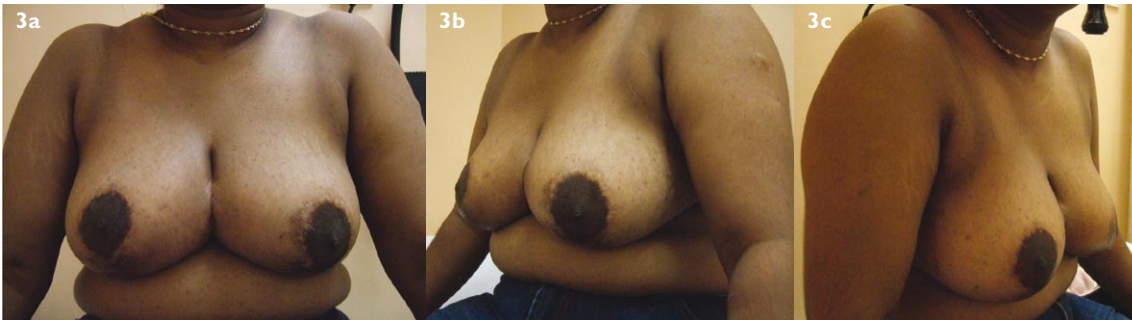
**Fig. 1** Preoperative photographs of the breasts in the (a) anterior, (b) left oblique and (c) right oblique projections show synmastia.



**Fig. 2a** Preoperative photograph shows skin markings for vertical-scar reduction mammoplasty.



**Fig. 2b** Intraoperative photograph shows intervening connective tissue between breasts that is adherent to the overlying presternal skin.



**Fig. 3a-c** Photographs taken eight months postoperatively shows the breast appearances after successful surgery.

the two breasts (Fig. 2b). This intervening connective tissue was found to be adherent to the overlying presternal skin and was anchored to the presternal fascia and periosteum together with the surrounding intermammary dermal and subdermal tissue. This was performed using eight interrupted size one polydioxanone sutures placed vertically in the midline. This approach avoided incisions on the sternum, which is one of the keloid-prone sites on the body. Eight months postoperatively, the wounds were healed with no evidence of infection or dehiscence. There was also no haematoma or seroma. The intermammary sulcus was maintained (Figs. 3a–c).

## DISCUSSION

There has only been one previously reported case of congenital synmastia<sup>(1)</sup>. In view of the Asian predilection for keloids<sup>(2)</sup>, especially in the sternal region, any incision in this area should be avoided. Taking into consideration the patient's age and the possibility of child-rearing and breastfeeding, there should be minimal disruption to the ductal or glandular tissue in either breast. Several options have to be

considered in order to dissect the entire thoracic cutaneo-glandular tissue in the presternal region. Surgery aims for a better cosmetic outcome with avoidance of sternal incisions. Thus, small or remote incisions made in an inconspicuous region with access to the inner quadrants of the breast and presternal region would be preferred.

Options may include a transaxillary or transareolar endoscopic approach, bilateral periareolar incisions with subcutaneous dissection, inframammary, subxiphoid or suprasternal approaches, or a combination of these. Other similar methods adopted in gynaecomastia and breast-conserving surgery for cancer may also be considered<sup>(3-4)</sup>. Although a sternal incision would allow direct access and exposure, a long marked surgical scar with a higher tendency for keloid formation would be a disadvantage. A periareolar approach requires a surgical wound on the breast and this may detract from its advantage. In practice, however, the current results show that the surgical wound around the nipple actually becomes inconspicuous after the surgery. An important point to note is to avoid injury

and burns at the edge of the skin and especially at the nipple.

As this patient required concurrent reduction mammoplasty, a vertical extension to this periareolar approach was required for the resection of lower pole glandular tissue. This approach allowed for easier access to the presternal area for the anchoring sutures. In patients not requiring reduction mammoplasty, this vertical extension can be omitted while allowing access and exposure to the presternal area for anchorage of sutures.

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