

Central/Inferior Pedicle Technique for Reduction Mammoplasty: A Systematic Review

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Abstract

Background: Intention of reduction mammoplasty is to minimize the breast volume and maintain supply of blood and innervations to NAC (nipple-areola-complex), to lift NAC to higher position in mound of breast using any reliable technique like central pedicle technique. **Methods:** This research selected and observed 15 patients who underwent central pedicle technique for mammoplasty of breast reduction. Age criterium included for this research is 18 years to 60 years for 5 years from Chinese patients. In addition to these, this study systematically reviewed about central pedicle technique for 25 years. Papers were selected from 1996 to 2021. **Results:** Using central pedicle technique, shape and projection of breast were reduced. Such changes of measurements showed that postoperative technique leads to long-term satisfactory impact. **Conclusion:** Central pedicle technique was found to be best, reliable and safe technique for reduction mammoplasty. Reduction mammoplasty is used for reducing the ptotic and large breasts. It provides more satisfactory and good aesthetic outcomes. Majority of patients do not have any complications postoperative. Complications rate is minimal when central pedicle technique is used for reduction mammoplasty. Patients with ptotic and large breasts would have huge advantage postoperative.

Keywords

Central Pedicle Mammoplasty, Breast Reduction, Inferior Pedicle, Chinese Patients, Breast Cancer, Patient Satisfaction

1. Introduction

Reduction mammoplasty in plastic surgery is generally performed operations

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and majority of patients have reported high satisfaction level. Ptotic and large breasts cause psychological and physical distress. Aim of reduction mammoplasty is to minimize the breast volume and maintain supply of blood and innervations to NAC (nipple-areolar complex), to lift NAC to higher position in mound of breast, for creating an aesthetic shape which is steady over time and placing scars in suitable place cosmetically [1]. Central pedicle technique or central mound technique of reducing the breast is versatile and it separates the skin of gland, reduces glandular tissue directly and customizes skin tailoring for obtaining project to control tension on closure. Central pedicle method sustains vascular supply to breast gland that involves branches of thoracoacromial and thoracic arteries laterally and superiorly. Extra vessels enter posteriorly gland that involves pectoralis main perforators passed by internal mammary and anteromedial and anterolateral perforators. Clinical experiences of such technique are reliable and safe for patients with marked ptosis or who require huge reductions, thus obviating the requirement for free areola /nipple grafting [2].

Inferior pedicle method or techniques is successfully used in training programs of plastic surgery as reliable and safe techniques for reducing and reshaping the breast with adequate sensation, NAC position, vascularity. It preserves the lactation of breast as continuity of parenchyma of breast is undisturbed at the same time bottoming out seems to be one of main drawbacks that could be avoided by penetrating the huge tissue centrally located under NAC with minimal tissue along the pedicle's lower border. Resection in some breast areas makes this technique more difficult [3].

2. Methods and Materials

This research selected and observed 15 patients who underwent central pedicle technique for mammoplasty of breast reduction. Age criterium included for this research is 18 years to 60 years for 5 years from Chinese patients. In addition to these, this study systematically reviewed about central pedicle technique for 25 years.

2.1. Search Strategy

Papers were selected from electronic databases namely Embase, Pubmed Central and Digital Library. Keywords and headings used for selection for central pedicle technique, inferior pedicle technique, comparison of central versus superomedial pedicle, reduction mammoplasty, breast reduction. Papers were selected from 1996 to 2021.

2.2. Eligibility Criteria

Papers were selected based on technique named central/inferior pedicle technique. Eligibility criteria for full-text articles are research must the central/inferior pedicle technique; reduction mammoplasty; completed studies, appropriate outcomes. Studies which are not included are case studies, abstracts only, incomplete studies, not relevant studies, other pedicle techniques, general

descriptions. Duplicates are not included in full text articles.

From 40 eligible papers, they are categorized based on age (5), duration (8), complication rate (11), comparison (4), follow up post-surgery (6) and review based paper (6).

Flow diagram of selection criteria is described in **Figure 1**.

3. Review of Literature

This paper reviews central/inferior pedicle technique with reduction mammoplasty based on these categories namely age of patients, duration, complication rate after central pedicle technique, comparison of superomedial and inferior pedicle technique, follow up after central pedicle technique and review based studies.

3.1. Central/Inferior Pedicle Technique and Age of Patients

Zhu *et al.* [4] adopted inferior pedicle technique for 18 years to 65 years. Number of patients included in this research is 24 breasts in WISE and 14 breasts in modified ROB. It was found out maximized superior fullness in pole in modified ROB whereas WISE group found high projection in breast and greater medial fullness of pole. Modified central pedicle technique was adopted by Kim *et al.* [5] among 19 - 61 years. 56 patients were selected in this study. It was observed that modified technique for central pedicle for reducing mammoplasty with technique of vertical scar is a versatile technique for reducing breast for all tissue conditions and shapes, by giving a conical breast shape with less burden of scar and high preservation of function for breast. Bilgen *et al.* [6] adopted central and inferior mound pedicle breast reduction in Gigantomastia among 21 - 61 years.

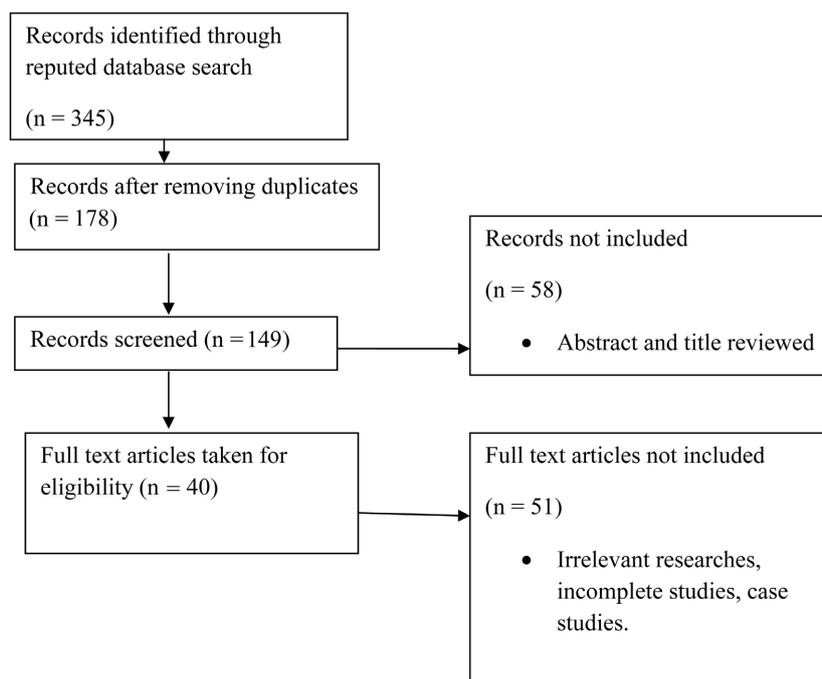


Figure 1. Flow diagram of selection criteria.

72 patients for 3 years were studied. Inferior pyramidal pedicle method is found to be versatile technique for reduction mammoplasty which could be used in all sizes of breast. It preserves the sensation of nipple and potential to lactate with minimal complication rates.

Eskitascioglu and Yontar [7] studied about combined advantages of dermal flap suspension and plaction of inferior pedicle in inverted T-scar mammoplasty for breast reduction for 17 to 76 years. In this research, 121 patients were selected from March 2008 to November 2017. It was clear that combined use of dermal flap suspension and pedicle plaction enhances the position and shape controllability in technique of inferior pedicle, gives a stabilized and projectile breast mound helps to reach satisfactory cosmetic results in long-term and prevents deformities of breast. Erfon *et al.* [8] examined about single central block technique among 17 to 75 years. 2097 patients were underwent single central block for reduction mammoplasties (1556) and mastopexies (541). This technique permits surgeon to get a good breast shape like cone, NAC repositioning and preserving, its sensation and vascularisation without tension on sutures of skin flaps, result in better and smaller scars. **Table 1** represents central/inferior pedicle technique and age of patients.

3.2. Central/Inferior Pedicle Technique and Duration

Nicholson *et al.* [9] studied about modified central mound pedicle for reducing breast. 116 patients underwent bilateral reduction of breast were studied for 7 years. It was clear that pseudoptosis development is delayed for some patients. Bayramicli [10] developed a novel septum-based pedicle (central pillar). 62 patients carried out bilateral reduction for 26.5 months. It was obvious from the findings of the study are central pillar technique is best substitute for glandular breasts among young patients. Double-unit technique with inverted-T incision and superomedio-central pedicle was studied by Wolter *et al.* [11]. 831 reduction mammoplasties are performed among 630 patients for consecutive 7 years. It was clear that proposed technique is effective for achieving reduction of volume. Movassaghi *et al.* [12] studied about central-inferior pedicle using low mammoplasty with horizontal scar. 239 patients were selected for studying central-inferior pedicle using low mammoplasty with horizontal scar for 6 years. Thus it was concluded that BMRT (Boston Modification of Robertson technique) is reliable and safe method for reducing mammoplasty when there is significant ptosis and macromastia.

Wechselberger *et al.* [13] estimated the amount of resected tissue in breast has impact on sensitivity of breast post inferior pedicle mammoplasty. 15 patients were selected for examining the impact on sensitivity of breast post inferior pedicle mammoplasty from April 1999 to January 2000. It was clear that touch sensitivity have been increased for all patients till 6 months post-surgery. Shod [14] carried out a research to examine about inferior pedicle for bilateral mammoplasty for reduction with inverted T-procedure. 23 patients were selected and

Table 1. Central/inferior pedicle technique and age of patients.

S. No	Author and Year	Method and treatment	Age of Patients	Number of Patients	Outcomes
1	Zhu <i>et al.</i> , 2016	Inferior pedicle	18 years to 65 years	24 breasts in WISE and 14 breasts in modified ROB	Maximized superior fullness in pole in modified ROB whereas WISE group found high projection in breast and greater medical fullness of pole
2	Kim <i>et al.</i> , 2017	Modified central pedicle technique	19 - 61 years	56 patients and follow-up duration was 12 - 53 months	Modified technique for central pedicle for reducing mammoplasty with technique of vertical scar is a versatile technique for reducing breast for all tissue conditions and shapes, by giving a conical breast shape with less burden of scar and high preservation of function for breast
3	Bilgen <i>et al.</i> , 2019	Central and inferior mound pedicle breast reduction in Gigantomastia	21 - 61 years	72 patients for 3 years	Inferior pyramidal pedicle method is found to be versatile technique for reduction mammoplasty which could be used in all sizes of breast. It preserves the sensation of nipple and potential to lactate with minimal complication rates
4	Eskitascioglu and Yontar, 2019	Combined advantages of dermal flap suspension and placcation of inferior pedicle in inverted T-scar mammoplasty for breast reduction	17 to 76 years	121 patients from March 2008 to November 2017	Combined use of dermal flap suspension and pedicle placation enhances the position and shape controllability in technique of inferior pedicle, gives a stabilized and projectile breast mound helps to reach satisfactory cosmetic results in long-term and prevents deformities of breast
5	Erfon <i>et al.</i> , 2019	Single central block technique	17 to 75 years	2097 patients were underwent single central block for reduction mammoplasties (1556) and mastopexies (541)	This technique permits surgeon to get a good breast shape like cone, NAC repositioning and preserving, its sensation and vascularisation without tension on sutures of skin flaps, result in better and smaller scars

observed for 3 years. It was observed that reduction mammoplasty enhanced women quality of life using inferior pedicle technique.

Al-Boudi and Alhassanieh [15] studied about inferior pedicle technique. 32 patients who underwent inferior pedicle procedure were selected from January 2018 to Dec 2020. It was found that suspension of inferior pedicle with the help of crossed dermal flaps prevent bottoming out, do not include alloplastic materials or allogenic materials. Weichman *et al.* [16] analyzed about central mound technique and its outcomes. 13 patients were selected for understanding about central mound technique for 5 years. Proposed technique gives reproducible and reliable outcomes and has to consider patients with asymmetry or macromastia and irradiation history. **Table 2** depicts central/inferior pedicle technique and duration.

3.3. Superomedial versus Inferior Pedicle Technique

Fahmy *et al.* [3] compared inferior pedicle and superomedial pedicle technique. 24 patients were selected for studying inferior versus superomedial pedicle technique during Jan 2017 and Sep 2018. From the findings of the research, it was clear that both inferior and superomedial pedicle technique are feasible, safe and effective for reduction mammoplasty. Kemaloglu and Ozocok [17] compared inferior pedicle and superomedial pedicle technique. 25 patients were selected for observing inferior and 25 patients for superomedial pedicle after 1 year surgery. It was found out that superomedial pedicle was best for skin excision of wise pattern in gigantomastic patients when compared with inferior pedicle. Sapino *et al.* [18] examined about inferior pedicle reduction versus superomedial pedicle. 58 patients were selected from January 2015 to January 2017 for comparing inferior and superomedial pedicle. It was clear that both techniques give satisfactory and stable outcomes. Makboul *et al.* [19] compared superomedial versus inferior pedicle techniques. 60 cases were selected during January 2009 to December 2014. It was observed that breast contour and long term projection were satisfactory among women who underwent superomedial pedicle. Superomedial pedicle performs better than inferior technique. **Table 3** depicts superomedial pedicle versus inferior pedicle technique.

3.4. Central/Inferior Pedicle Technique and Complication Rate

Denewer *et al.* [20] carried out an investigation to study about therapeutic mammoplasty by inferior pedicle among large-breasted persons among early breast cancer with upper quadrants. 35 patients were selected between August 2009 and October 2012. From the findings of the research, it was observed that dehiscence of wound was major complications faced after surgery and 6 patients were suffered. Cammarota *et al.* [21] studied about inferior dermal pedicle method. 74 patients were selected for analyzing inferior dermal pedicle method from January 2005 to January 2013. 62.16 per cent of patients opined that satisfaction after surgery was excellent, 25.67 per cent of patients opined that

Table 2. Central/inferior pedicle technique and duration.

S. No	Author and Year	Method and treatment	Patients and duration	Duration	Outcomes
1	Nicholson <i>et al.</i> , 2018	Modified central mound pedicle for reducing breast	116 patients underwent bilateral reduction of breast	7 years	Pseudoptosis development is delayed for some patients
2	Bayramicli, 2012	Novel septum-based pedicle (central pillar) was developed	62 patients carried out bilateral reduction	26.5 months	Central pillar technique is best substitute for glandular breasts among young patients
3	Wolter <i>et al.</i> , 2021	Double-unit technique with inverted-T incision and superomedio-central pedicle	831 reduction mammoplasties are performed among 630 patients	7 years	Proposed technique is effective for achieving reduction of volume
4	Movassaghi <i>et al.</i> , 2006	central-inferior pedicle using low mammoplasty with horizontal scar	239 patients	6 years	BMRT (Boston Modification of Robertson technique) is reliable and safe method for reducing mammoplasty when there is significant ptosis and macromastia
5	Wechselberger <i>et al.</i> , 2001	Estimate the amount of resected tissue in breast has impact on sensitivity of breast post inferior pedicle mammoplasty	15 patients	From April 1999 to January 2000	Touch sensitivity have been increased for all patients till 6 months post-surgery
6	Shod, 2021	Inferior pedicle for bilateral mammoplasty for reduction with inverted T-procedure	23 patients	3 years	Reduction mammoplasty enhanced women quality of life
7	Al-Boudi and Alhassanieh, 2021	Inferior pedicle technique	32 patients	From January 2018 to Dec 2020	Suspension of inferior pedicle with the help of crossed dermal flaps prevent bottoming out, do not include alloplastic materials or allogenic materials
8	Weichman <i>et al.</i> , 2014	Central mound technique	13 patients	5 years	Proposed technique gives reproducible and reliable outcomes and have to consider patients with asymmetry or macromastia and irradiation history

Table 3. Superomedial versus inferior pedicle technique.

S. No	Author and Year	Method and treatment	Follow up routine	Outcomes
1	Fahmy <i>et al.</i> , 2019	Inferior pedicle Vs. Superomedial pedicle technique	24 patients during Jan 2017 and Sep 2018	Both inferior and superomedial pedicle technique are feasible, safe and effective for reduction mammoplasty

Continued

2	Kemaloglu and Ozocok, 2017	Inferior pedicle and superomedial pedicle technique	25 patients for inferior and 25 patients for superomedial pedicle after 1 year surgery	Superomedial pedicle was best for skin excision of wise pattern in gigantomastic patients when compared with inferior pedicle
3	Sapino <i>et al.</i> , 2021	Inferior pedicle reduction versus superomedial pedicle	58 patients from January 2015 to January 2017	Proposed technique gives satisfactory and stable outcomes
4	Makboul <i>et al.</i> , 2017	Superomedial versus inferior pedicle	60 cases during January 2009 to December 2014	Breast contour and long term projection were satisfactory among women who underwent superomedial pedicle. Superomedial pedicle performs better than inferior technique

satisfaction after surgery was good. 12.17 per cent of patients sated that satisfaction after surgery was fair. Majority of patients were satisfied using inferior dermal pedicle method. Al-Mahmoudy and Reyad [22] conducted a research among patients who underwent inferior pedicle mammoplasty for reduction. 10 patients were chosen from January 2017 to March 2018 for inferior pedicle mammoplasty. It was concluded that satisfactory results were noticed for long-term both subjectively and objectively with good fullness in upper pole and no bottoming out and have vertical scar.

Mandrekas *et al.* [23] studied about inferior pedicle technique. 371 patients were selected to analyze inferior pedicle technique for 10 years. It was concluded from the outcomes that overall rate of complication was 11.4 percent. Elsabbagh and Zayed [24] conducted a research among patients using inferior pedicle technique. 21 patients were selected from June 2012 to March 2017. It was noticed that proposed technique with few technical modifications was given to be safe and excellent technique for reduction of breast of ptotic and large breasts. Filho *et al.* [25] examined about inferior pedicle technique for nipple-areolar among 21 years to 68 years. 40 patients were chosen for studying about inferior pedicle technique and follow up was done till 24 months post-surgery. Complications seen early after surgery were dehiscence of strand mid-point (10%) followed by hematoma (5%).

Jozsef *et al.* [26] developed a modified central pedicle or inferior pedicle. 117 patients were selected for findings the outcomes of modified central pedicle or inferior pedicle. It was observed that proposed method are adopted for decreasing pseudoptosis and migrating nipple down and provide a safe substitute for high satisfaction of patient and long-lasting symmetry. Cho *et al.* [27] carried out an investigation for identifying inferior dermal pedicle or central pedicle. 41 patients were selected for 6 years. It was found out that periareolar mammoplasty for reduction is best for patients who need reduction of breast less than 500 g

each side.

Savaci [28] selected a central pedicle technique to avoid a vertical scar. 13 patients were selected for 3 years to know about central pedicle technique. It was found that no complications were observed using central pedicle technique. Central pedicle flap technique was combined with short submammary scar for reduction mammoplasty studied by Shin *et al.* [29]. Age criteria included in this research are 17 to 60 years. 30 patients were selected for studying central pedicle flap technique. It was noticed that combined method is best for patients who need resection which range from 200 g to 600 g per breast with moderate ptosis degree and good elasticity of skin. Grant and Rand [2] conducted a research to examine about vascularized central pedicle reduction of breast. 239 patients were selected for analyzing vascularised central pedicle technique for breast reduction. It was found that 50 percent is reduced in complication rate and 35 percent is reduced in operative time. **Table 4** depicts central/inferior pedicle technique and complication rate.

3.5. Central/Inferior Pedicle Technique and Follow Up Routine

Oliveira [30] studied about inferior pedicle technique, vascularisation and sensitivity of nipple-areola and its complications are observed. Surgical approach was adopted in 60 patients. They were followed up at 15 days, 30 and 60 days; 3 and 6 months and 1 year. From the follow-up routine, it was clear that with technique namely inferior pedicle, vascularisation and sensitivity of nipple-areola complex could be maintained properly and results in minimal complication rates. Widegrow [31] monitored the patients who underwent inferior pedicle fascial suspension. 25 patients followed up for 1 year post-surgery. From the findings of the study, it was found that 2 patients had put more weight post-surgery. It was also noticed that no major complications were seen post-surgery.

Copcu [32] developed a new technique namely COPCUs (conical pilated central U shaped) mammoplasty. 46 patients were monitored post-surgery from 6 to 36 months. It was clear from the findings of the results that all the patients who underwent COPCUs were satisfied with aesthetic and functional outcomes and no one had main complications. Echo *et al.* [33] examined about technique namely inferior pedicle for reducing breast. 38 patients were selected and time for follow-up time post-surgery was seven months. It was concluded that projection and shape of breast were sustained with optimistic aesthetic outcomes during follow-up.

Tripllicated inferior pedicle technique was studied by Samy *et al.* [34]. 15 patients were selected during January 2020 and May 2020 with 6 months follow-up. From the findings of the research, it was found out that proposed technique avoid main complication and breast shape maintained after reduction of breast. Abbate *et al.* [35] studied about central mound mastopexy to correct tubular or tuberous breast deformity for 24-year-old patient. Single patient was selected to study about central mound mastopexy with long-term follow-up. This

Table 4. Central/inferior pedicle technique and complication rate.

S. No	Author and Year	Method and treatment	Patients and duration	Outcomes
1	Denewer <i>et al.</i> , 2013	Therapeutic mammoplasty by inferior pedicle among large-breasted persons among early breast cancer with upper quadrants	35 patients between August 2009 and October 2012	Dehiscence of wound was major complications faced after surgery and 6 patients were suffered
2	Cammarota <i>et al.</i> , 2014	Inferior dermal pedicle method	74 patients from January 2005 to January 2013	Satisfaction after surgery was excellent (62.16 per cent), good (25.67 per cent), fair (12.17 per cent)
3	Al-Mahmoudy and Reyad, 2019	Inferior pedicle mammoplasty for reduction	10 patients during January 2017 to March 2018	Satisfactory results for long-term both subjectively and objectively with good fullness in upper pole and no bottoming out and have vertical scar
4	Mandrekas <i>et al.</i> , 1996	Inferior pedicle technique	371 patients during 10 years	Overall rate of complication was 11.4 percent
5	Elsabbagh and Zayed, 2018	Inferior pedicle technique	21 patients from June 2012 to March 2017	Proposed technique with few technical modifications was given to be safe and excellent technique for reduction of breast of ptotic and large breasts
6	Filho <i>et al.</i> , 2014	Inferior pedicle technique for nipple-areolar for 21 years to 68 years	40 patients and follow up was done till 24 months post-surgery	Complications seen in early after surgery were dehiscence of strand mid-point (10%) followed by hematoma (5%)
7	Jozsef <i>et al.</i> , 2021	Modified central pedicle or inferior pedicle	117 patients	Proposed method are adopted for decreasing pseudoptosis and migrating nipple down and provide a safe substitute for high satisfaction of patient and long-lasting symmetry
8	Cho <i>et al.</i> , 2008	Inferior dermal pedicle or Central pedicle	41 patients for 6 years	Periareolar mammoplasty for reduction is best for patients who need reduction of breast less than 500g each side
9	Savaci, 1996	Central pedicle technique to avoid a vertical scar	13 patients for 3 years	It was found that no complications were observed using central pedicle technique

Continued

10	Shin <i>et al.</i> , 1996	Central pedicle flap technique was combined with short submammary scar for reduction mammoplasty for 17 to 60 years	30 patients	Combined method is best for patients who need resection which range from 200 g to 600 g per breast with moderate ptosis degree and good elasticity of skin
11	Grant and Rand, 2001	Vascularized central pedicle reduction of breast	239 patients	It was found that 50 percent is reduced in complication rate and 35 percent is reduced in operative time

study represents successful reconstruction with tubular and tuberos breast deformity of patient using central mound technique for reducing mastopexy and no prosthetic device is used. **Table 5** represents central/inferior pedicle technique and follow up routine.

3.6. Review Studies for Central/Inferior Pedicle Technique

Swanson [36] compared vertical and central mound pedicle technique. 23 manuscripts were determined and selected for comparing vertical and central mound pedicle. It was found out that central mound pedicle reduce projection of breast than vertical technique. Delong [37] carried out a retrospective review with central mound pedicle for studying about reduction mammoplasty. Papers were selected from 19 years. It was concluded that central mound pedicle is effective and safe approach for mammoplasty of reduction for unilateral symmetrising operations and bilateral macromastia patients. Bustos *et al.* [38] conducted a retrospective review for studying about patients who taken inferior pedicle mammoplasty for reduction. 5 years papers were selected for understanding about inferior pedicle technique for reduction. It provides minimal risk of necrosis. Complications rate is also minimal. Aggarwal [39] compared superior-medial pedicle and inferior pedicle. TIG database was used for obtaining list of oncoplastic trainees and trainees associated with TIG national oncoplastic fellowship. It was concluded that most of surgeons preferred superior-medial pedicle (62%) and 34 percent of surgeons preferred inferior pedicle technique.

Blondeel *et al.* [1] focused on latero-central glandular pedicle technique for reducing breast. 68 procedures were reviewed. It was noticed that because of maximized vascularisation of NAC, complications of wound were minimized with novel technique. NAC sensations were preserved in all cases. Yvorchuk [40] studied about central pedicle technique. Age criteria selected for this research is 18 years to 62 years. 50 consecutive cases were studied. From the findings of the study, it was observed that minimal complication rate was observed. **Table 6** denotes review studies for central/inferior pedicle technique.

Table 5. Central/inferior pedicle technique and follow up routine.

S. No	Author and Year	Method and treatment	Follow up routine	Outcomes
1	Oliveira, 2016	Inferior pedicle technique	Surgical approach adopted in 60 patients. They were followed up at 15 days, 30 and 60 days; 3 and 6 months and 1 year	With technique namely inferior pedicle, vascularisation and sensitivity of nipple-areola complex could be maintained properly and results in minimal complication rates
2	Widegrow, 2005	Inferior pedicle fascial suspension	25 patients followed up for 1 year post surgery	2 patients had put more weight post-surgery
3	Copcu, 2009	New technique was developed namely COPCUs (conical pilated central U shaped) mammoplasty	46 patients monitored post-surgery during 6 to 36 months	All the patients who underwent COPCUs were satisfied with aesthetic and functional outcomes and no one had main complications
4	Echo et al., 2014	Inferior pedicle for reducing breast	38 patients and time for follow-up was seven months	Projection and shape of breast were sustained with optimistic aesthetic outcomes during follow-up
5	Samy et al., 2021	Triplicated inferior pedicle	15 patients during January 2020 and May 2020 with 6 months follow-up	Proposed technique avoid main complication and breast shape maintained after reduction of breast
6	Abbate et al., 2017	Central mound mastopexy to correct tubular or tuberous breast deformity for 24 years old patient	Single patient with long-term follow-up	This represents successful reconstruction with tubular and tuberous breast deformity of patient using central mound technique for reducing mastopexy and no prosthetic device is used

Table 6. Review studies for central/inferior pedicle technique.

S. No	Author and Year	Method and treatment	Papers for review	Outcomes
1	Swanson, 2021	Central mound pedicle and vertical technique is compared	23 manuscripts were determined	Central mound pedicle reduce projection of breast than vertical technique
2	Delong, 2020	Retrospective review with central mould pedicle	Papers were selected from 19 years	Central mound pedicle is effective and safe approach for mammoplasty of reduction for unilateral symmetrising operations and bilateral macromastia patients
3	Bustos <i>et al.</i> , 2020	Patients who taken inferior pedicle mammoplasty for reduction-retrospective review	5 years	It provides minimal risk of necrosis

Continued

4	Aggarwal, 2016	Comparing superior-medial pedicle and inferior pedicle and	TIG database was used for obtaining list of oncoplastic trainers and trainees associated with TIG national oncoplastic fellowship	Most of surgeons preferred superior-medial pedicle (62%) and 34 percent of surgeons preferred inferior pedicle technique
5	Blondeel <i>et al.</i> , 2003	Latero-central glandular pedicle technique for reducing breast	68 procedures were reviewed	Because of maximized vascularisation of NAC, complications of wound were minimized with novel technique. NAC sensations was preserved in all cases
6	Yvorchuk, 1999	Central pedicle technique for 18 years to 62 years	50 consecutive cases	Minimal complication rate was observed

4. Discussion

This research selected and observed 15 patients who underwent central pedicle technique for mammoplasty of breast reduction. Mean age for 36 years. This study reviews the reduction mammoplasty using central pedicle technique. Reduction mammoplasties were carried out using central pedicle technique that removal excess tissue in breast through hidden scar. Follow up time post-surgery was every 6 months. Ptosis and breast hypertrophy are possible complications of patients who prefer CPT. Some of the complications faced by patients who underwent CPT are seroma or haematoma (blood clot), slight wound dehiscence. It was observed that, when considering measurements of breast, central pedicle technique permits main reduction of preoperative measures of breast and volume around 34.5 percent with optimal reduction of bra size. Complications noticed preoperative surgery was minimized gradually. Unpleasant and intertrigo odors were improved. Back pain, neck pain, breast pain and shoulder pain were minimized post operation significantly. Issues with external and clothing appearance prior surgery were enhanced post-surgery except for short stature patients and aged patients. Young patients are more benefitted using central pedicle technique. Few patients faced some complications like back pain and breast pain. Majority of the patients were reported that shape and projection of breast were reduced significantly. Such changes of measurements shown postoperative technique leads to long-term satisfactory impact. Majority of patients (95 percent) who underwent CPT are satisfied with results. Overall, satisfaction level was satisfactory.

5. Conclusion

Central pedicle technique was found to be best, reliable and safe technique for reduction mammoplasty. Reduction mammoplasty is used for reducing the ptotic and large breasts. It provides more satisfactory and good aesthetic outcomes. Majority of patients who underwent CPT do not have any complications

post-surgery. Complications rate is minimal when central pedicle technique is used for reduction mammoplasty. Patients with ptotic and large breasts would have huge advantage post-surgery. In addition to that, central mound technique is used for all kinds of tissue conditions and size of breast.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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