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Chin Enhancement Using Serdev Suture: Five Case Reports

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Additional information is available at the end of the chapter

<http://dx.doi.org/10.5772/56711>

1. Introduction

The main goal of aesthetic facial cosmetic surgery is to achieve balance and harmony to the facial features. Chin augmentation and correction are the most important procedures to obtain overall facial beauty. Chin augmentation has been conducted since 100 years ago. Some synthetic implant alloplastic materials have been used including the observation of benefits, loss, and complication accompanied with it. The beauty of the chin is one of the important factors to enhance aesthetic facial features, where the chin is the lower most from 3 facial parts. Aesthetically, protrusion of the chin should be parallel to the line of facial profile. Protrusion of the chin gives character to the face. However imperfection and protrusion of the chin as a result of trauma, congenital or aging may hinder an individual's appearance. Inconsistency between the bone and soft tissue is a common cause of impaired aesthetic beauty. [1,2]

Aging causes the skin to wrinkle and an increase in subcutaneous tissue causes change in projection and facial contour. This is caused by the laxity of the skin and facial muscles that support the gravity force. The area of the face that creases due to age includes cheeks and chin, which causes face disproportion in some individuals. [1,3,4]

There are many techniques/methods used to correct and tighten sagging facial skin, one of them by employing Serdev suture. This method involves lifting part of the face to correct the volume and position of the soft tissue with fixation of the fascia/muscle percutaneous without conventional incision. This method is preferably chosen because it is relatively safe (with minimal side effects), easy, and quick with satisfactory results. This method was invented by Dr. Nikolay P. Serdev. Besides chin lift, the method can also be applied to lift other facial parts, buttocks and abdominal area. [2,5]

Serdev suture involves passing sutures by needle into the soft tissue under the skin and stitched according to the desired purpose. This action can be performed in an outpatient

unit because it is relatively safe and complications are relatively mild, such as edema, hematoma, infection and scar (rare). Patients must be selected, amongst others, patients must not have a history of heart disease, hypertension, uncontrolled diabetes mellitus, blood clotting disorders, and not taking any anti-coagulant medications; also the surgery is suggested not to be performed to patients who are under 20 years old due to the mandible bone has not yet fully grown. [2,3,5,6]

Five cases of chin enhancement is reported on women ages between 40-53 years old using Serdev suture and without any complication.

2. Case reports

2.1. First case

A 34-year old woman came to aesthetic clinic of Mintohardjo hospital for chin enhancement. From anamnesis, no chronic medical history is found like diabetes mellitus, hypertension, heart disease, or bleeding disturbances. In terms of physical examination, no abnormality to the chin is found. Routine laboratory blood test is within normal limits. With a clean medical



Figure 1. (A) and (B) Surgical instruments and materials prepared



Figure 2. (A) Pre-Operation (B) Post-operation

record, chin lift can be performed using Serdev suture and after the patient read, understand, and agree to sign a medical consent.

SurgeryReport:

1. Document chin from different angle.
2. Chin position is measured by drawing a line between the lower lip and chin, then place a mark under the chin for needle insertion and exit point. .
3. The patient is laid on the operating bed.
4. Surgical instruments are disinfected using Betadine/povidone-iodine.
5. Sterile drapes are placed around the field to delineate sterile areas.
6. Local anesthesia is given by injecting 2% lidocaine on the lowermost of the chin, under inferior lip.
7. Chin skin that has been marked is punctured using a special needle by following the internal chin muscle until it penetrates the mark below inferior lip.
8. Serdev thread is inserted in the hole at the tip of the needle, and then pulled down, thus appearing under the chin.
9. Needle is inserted back to the lowermost chin following the outer chin muscle until it penetrates to the same mark below the inferior lip.
10. Thread is inserted to the needle tip then pulled again until the thread appears in the lowermost of the chin.
11. The tip of the thread is stitched to the first thread until reaching the desired chin lift.
12. The thread is cut just above the knot.
13. The skin around the knot is freed.
14. The wound is given betadine and covered with bandage as needed.
15. Document the results after operation is finished.

After the operation is completed, patient can perform activities as normal, however, the patient should take amioxclin-clavulanic acid 3x500 mg for 5 days and administer mefenamic acid 3 times in one day if in pain.



Figure 3. (A) marking for insertion and exit point (B) Anesthetic lidocaine 2%



Figure 4. Thread is inserted to the tip of the needle and pulled until thread is seen in the lowermost of the chin.

2.2. Second case

A 42 year old woman came to aesthetic clinic of Mintohardjo Hospital to enhance the chin which she felt was slightly flabby. From anamnesis, no chronic medical history is found like diabetes mellitus, hypertension, heart disease, or bleeding disturbances. In terms of physical examination, no abnormality to the chin is found. Routine laboratory blood test is within normal limits. Thereby, chin lift can be performed using Serdev method after the patient read, understand, and agree to sign a medical consent.



(A). Side view



(B). Front view

Figure 5. Before procedure



Figure 6. After procedure

Surgery report:

1. Document chin from different angle.
2. Chin position is measured by drawing a line between the lower lip and chin, then place a mark under the chin for needle insertion and exit point. .
3. The patient is laid on the operating bed.
4. Surgical instruments are disinfected using Betadine/povidone-iodine.
5. Sterile drapes are placed around the field to delineate sterile areas.
6. Local anesthesia is given by injecting 2% lidocaine on the lowermost of the chin, under inferior lip.
7. Chin skin that has been marked is punctured using a special needle by following the internal chin muscle until it penetrates the mark below inferior lip.
8. Serdev thread is inserted in the hole at the tip of the needle, and then pulled down, thus appearing under the chin.
9. Needle is inserted back to the lowermost chin following the outer chin muscle until it penetrates to the same mark below the inferior lip.
10. Thread is inserted to the needle tip then pulled again until the thread appears in the lowermost of the chin.
11. The tip of the thread is stitched to the first thread until reaching the desired chin lift.
12. The thread is cut just above the knot.
13. The skin around the knot is freed.
14. The wounds is given betadine and covered with bandage as needed.
15. Document the results after operation is finished.

After the operation is completed, patient can conduct activities as normal, however, the patient is advised to minimize the use of the lower jaw, like chewing hard foods. Patient is given amoxicilin-calvulanic acid 3x500 mg for 5 days and administer mefenamic acid 3 times in one day if in pain.



Figure 7. (A) and (B) Anesthetic lidocaine 2%



Figure 8. Thread is inserted to the tip of the needle and pulled until thread is seen in the lowermost of the chin.

2.3. Third case

A 30 year old woman came to Aesthetic Central RSAL Dr. Mintohardjo with the desire to perform chin lift because she feels her chin is lacking beauty and sagging.



Figure 9.

From anamnesis, no chronic medical history is found like diabetes mellitus, hypertension, heart disease, or bleeding disturbances. In terms of physical examination, no abnormality to the chin is found. Routine laboratory blood test is within normal limits. Thereby, chin lift can be performed using Serdev method after the patient read, understand, and agree to sign a medical consent.

2.4. Fourth case

A 39 year old woman came to Aesthetic Center RSLA Dr. Mintohardjo with the desire to perform chin lift because she feels her chin is lacking beauty and sagging.

From anamnesis, no chronic medical history is found like diabetes mellitus, hypertension, heart disease, or bleeding disturbances. In terms of physical examination, no abnormality to the chin is found. Routine laboratory blood test is within normal limits. Thereby, chin lift can be performed using Serdev method after the patient read, understand, and agree to sign a medical consent.



Figure 10.

2.5. Fifth case

A 45 year old woman came to Aesthetic Center RSAL Dr. Mintohardjo with the desire to perform chin lift because she feels her chin is lacking beauty and sagging.

From anamnesis, no chronic medical history is found like diabetes mellitus, hypertension, heart disease, or bleeding disturbances. In terms of physical examination, no abnormality to the chin is found. Routine laboratory blood test is within normal limits. Thereby, chin lift can be performed using Serdev method after the patient read, understand, and agree to sign a medical consent.



Figure 11.

3. Discussion

Chin enhancement is a surgical procedure to improve the shape or increase the size of the chin. For several decades, various methods and materials are used to enhance the chin. This includes implanted specimen from the body, transplantation of the bone and cartilage, fat, fascia, tendons and skin are the first materials used for this kind of procedure. A variety of alloplastic are then used to lift the chin. The polymer is used as a bone replacement. Since the 1950s, materials that can be used to enhance a small chin include silicon, collagen injection, expanded polytetrafluoroethylene (e-PTFE), high density polyethylene (HDPE), polydimethylsiloxane (PDMS), proplast, and hydroxyapatite porous block (PBHA) [1,2,7,8,9]

There are many injections available in the market over the last decade. But the materials are foreign for the body thus causing complications. Complications that occur include infection, position that is not fitting, paresthesia, absorption, rejection, migration, implant, erosion of soft tissue, asymmetry, and indentation. [1]

There are no materials found that are perfect for the face, therefore a study is conducted to determine a method that is much more effective and less complicated. Surgery without implant is introduced by Dr. Nikolay P. Serdev, an aesthetic expert from Sofia, Bulgaria, which has become popularly known as Serdev method. This method is an operation without implant and only uses thread to pull/stitch soft tissue in the chin. This technique is done by changing the angle of the chin and keeping the chin align to the jaw line thus providing a better result. [1,10]

The advantages of Serdev method compared with other methods is that the result can be seen after the surgery, complications is minimal, more natural results, long-lasting, and can be applied to other areas of the face and body. [10,11]

Serdev thread is a woven polycapromide that is semi-synthetic, antimicrobial and non-absorbable. The result is more natural looking chin because an implant is not inserted and the operation only uses thread that is stitch to the soft tissue. The method can be used to correct flabby chin and does not cause scarring. [1,12]

Serdev method only requires a short amount of time and also requires only local anesthesia. The duration of the operation is dependent upon the area that is to be operated, the level of flabbiness, and the expertise of the doctor. Results can be seen immediately after the operation, but still accompanied with mild edema. The pain will disappear by itself, and patients are recommended not to overly manipulate the chin. Serdev thread is not visible in the surface of the skin and the result can last 10-20 years. [1,12]

The report discusses cases for five women between the ages of 30 to 40 years old that complain sagging to the chin. From medical history record and check-up, there are no systematic diseases found or other contradiction, thus chin lift with Serdev method is chosen by patients.

Chin lift performed to the five patients are satisfactory with no complications after the operation. The patients are able to perform their usual daily activities after the operation. Although the patients are given antibiotic to prevent secondary infection and analgetic if in pain.

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