

Modified Loub Job: Our Experience

Jacob Antony Chakiath¹, Ravi Kumar Chittoria²

How to cite this article:

Jacob Antony Chakiath, Ravi Kumar Chittoria/Modified Loub Job- Our Experience/Indian Journal of Diabetes and Endocrinology, 2022;4(1):15-21.

Author's Affiliation: ¹Senior Resident, Department of Plastic Surgery, ²Professor, Department of Plastic Surgery & TeleMedicine, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry 605006, India.

Corresponding Author: Ravi Kumar Chittoria, Professor, Department of Plastic Surgery & Telemedicine, Jawaharlal Institute of Postgraduate Medical Education and Research, Pondicherry 605006, India.

E-mail: drchittoria@yahoo.com

Received on: 01.06.2022

Accepted on: 13.06.2022

Abstract

'Modified Loub Job' procedure is a liposuction assisted removal of the fat to reduce the bulk of the foot. It's a reconstructive procedure for congenital condition. The term 'Modified Loub Job' is introduced for the first time in literature. In our study, modified loub job was performed in a subject with left big toe macrodactyly.

Keywords: Loub Job, Foot Macrodactyly, Liposuction.

Introduction

Loub Job is a procedure which injects hyaluronic acid or fat at the level of plantar pads in order to thicken the panicle of the support areas of the foot and thus reduce pain when wearing high heels. It's a purely cosmetic procedure for acquired condition. In this article, we are introducing a 'Modified Loub Job' procedure in which we are performing a liposuction assisted removal of the fat to reduce the bulk of the foot. It's a reconstructive procedure for congenital condition. In our study, modified loub job was performed in a subject with left big toe macrodactyly. Macrodactyly of the foot is a rare congenital abnormality that causes pain, calluses¹, ulcers, difficulties wearing shoes, impairment in ambulatory capacity and gait development, aesthetic issues, and psychological issues²

Materials and Methods

This study was conducted in the Department of Plastic Surgery at a tertiary care centre after getting the departmental ethical committee approval. Informed written consent was taken from the patient for evaluation as well as the clinical photography. The subject was a 12 yr old female presented with increased size the left big toe since the last 11 yrs. Patient mother noticed an increase in the size of the left big toe at 1 yr of age. The size increased progressively as she grows and attained the present size. There is no associated pain. There is no difficulty in walking. There is no trauma history. No similar increase in size elsewhere in the body. No decreased use of the affected limb. No history of any congenital disorders in the family. No history of any vertebral anomalies, anal disorders, heart

disease, organomegaly. Child appears short for age and she has not attained menarche.

Mother had normal course during the child birth which was a full term normal delivery. Mother was 18yr at the time of child birth. Her antenatal period was uneventful. No history of any intake of medications or radiation in the antenatal period.

On local examination of the left leg and foot showed a swelling of the left big toe which was non

pulsatile, non compressible. Skin over the swelling shows no sign of inflammation. (figure 1) Skin over the swelling was pinchable. (figure 2) The range of movements of knee, ankle, toe movements at MTP, PIP, DIP joints were normal. The distal sensation, peripheral pulsations, capillary refill time were normal. The opposite side lower limb was normal. The upper limbs were normal. The gait was normal. The other systemic examinations were within normal limit.



Fig. 1: At the time of presentation - dorsal view



Fig. 2: At the time of presentation - plantar view

Clinical Measurement- preoperative

Measurements	Left	Right
Girth of big toe (at the level of proximal phalanx)	8 cm	6.5cm
Forefoot (at the level of shaft of metatarsal)	19 cm	18 cm
Length of great toe(from MCPJ till tip)	5.5 cm	4cm

Bucket Handle Test- difference in volume 20cm².

Gait test- Normal

Foot Impression of both foot were compared. (figure 3)

Angle of deviation of toe- 15 degree

Inter-metatarsal width ratio- 1.10

Forefoot area ratio- 1.5

Angle of deviation of toe 15 degree

Inter-metatarsal width ratio- 1.001 (figure 6)

Forefoot area ratio- 1.073 (figure 7)



Fig. 3: Foot Impression comparison.



Fig. 4: X ray foot- standing Anteroposterior view

Radiological Measurement – preoperative

X ray Standing Antero-posterior view of both foot. (figure 4)

Measurements (figure 5)	Left	Right
Distal Phalanx	1.64cm	1.52cm
Proximal Phalanx	2.21cm	1.93cm
Metatarsal	4.26cm	4.09cm
Soft tissue thickness	1.21cm	1.08cm
Bone thickness	0.7cm	0.7cm
Inter-metatarsal width	6.59cm	6.58cm
Forefoot area	770865	717984



Fig. 5: X ray measurement of phalanx and metatarsal



Fig. 6: Inter-metatarsal Width Ratio - 1.001

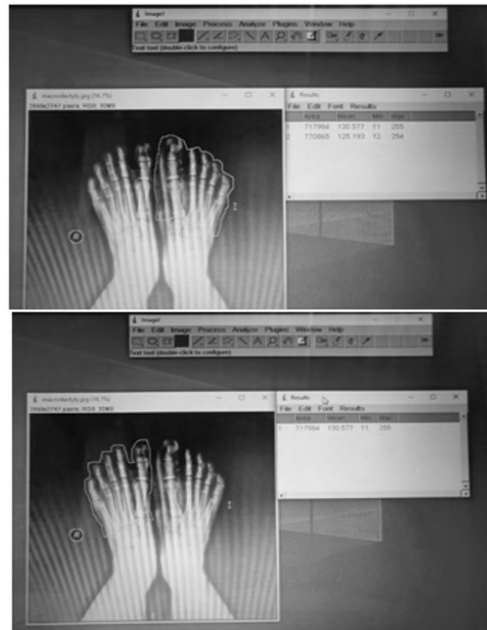


Fig. 7: Forefoot Area Ratio - 1.073



Fig. 8: Left Forefoot volume measurement by MRI

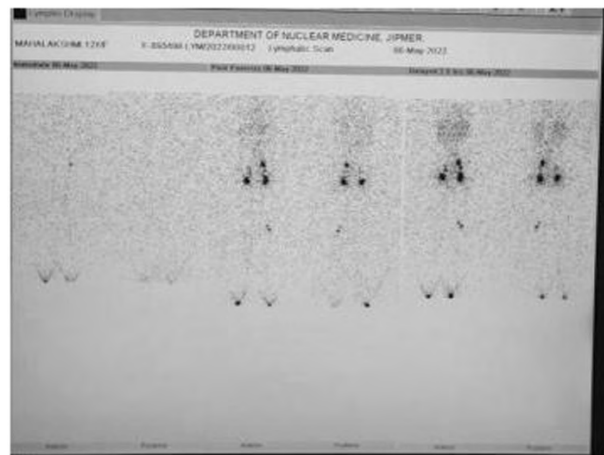


Fig. 9: Lymphoscintigraphy of both lower limb

Reports

MRI and MR angiography- Diffuse enlargement of soft tissue of left big toe with lateral deviation of the toe. Diffuse Hypertrophy of subcutaneous fat around the great toe possibility of Macro dystrophialipomatosis. No bony or vascular involvement. The volume of the left forefoot was 166.97cm³. (figure 8)

USG abdomen- Normal Study

Nerve Conduction Study- Digital Nerves couldn't be evaluated.

Electromyography- Small muscles couldn't be evaluated.

Lymphoscintigraphy- Normal Study.(figure 9)

With this extensive and systematic evaluation,

we could come to a definitive diagnosis of foot macrodactyly without vascular involvement and rule out any association of foot macrodactyly with other congenital anomalies and plan management of foot macrodactyly.

Our treatment plan was to perform staged invasive procedures. As the first stage, we performed liposuction assisted debulking of the soft tissue of the left great toe. Vascular line and creases marked.(figure 10) Tumescence was given and tourniquet applied to reduce the bleeding during procedure. Vertical incision made at the root of the big toe both dorsally and ventrally. 2mm uniplanar liposuction cannula was used for suction assisted liposuction.(figure 11) 2ml of the fat was aspirated. The girth of the left great toe was



Fig. 10: Preoperative marking of crease line

measured immediately after the procedure and noted, which 7 cm. The compression dressing with negative pressure wound therapy given. (figure 12) The wound site assessment was done on the 4th post operative day.

Results

After performing the liposuction assisted debulking of the left great toe, the girth of the left great toe decreased by 1cm. The assessment of the wound on the 6th post operative day showed healthy site with no signs of skin necrosis.(figure 13)

Discussion

The foot is less commonly affected by macrodactyly than the hand. The cause of macrodactyly has yet to be discovered. It's a type of overgrowth caused by a gain of function mutation in the PIK3CA pathway.



Fig. 11: Liposuction assisted debulking

Static and progressive clinical manifestations are the two types of clinical manifestations. Klippel-Trenaunay syndrome, Proteus syndrome, CLOVES syndrome, Ollier's disease, Maffucci syndrome, Milroy's disease, neurofibromatosis, and vascular anomalies needs to be excluded, as were patients with diagnoses of other known overgrowth syndromes or otherwise uncharacterized syndromic presentations of lower extremity enlargement. In 10% of individuals³, macrodactyly is linked with syndactyly, and in a smaller number, polydactyly and cryptorchidism. Macrodactyly may be associated with hernia.

The Loub Job is a new cosmetic treatment which has become a popular and effective way to ease the discomfort of wearing high heels. Named after famous shoe designer, Christian Louboutin, dermal fillers are injected in the balls of the feet which creates an immediate gel-like cushion that soothes the usual ache you feel after too many



Fig. 12: Compression therapy with negative pressure wound therapy



Fig. 13: Wound on 6th post operative day with no skin necrosis

hours teetering in heels. Loub Joe is a pure cosmetic procedure which helps to reduce pain while wearing high and pointed heels.

The goal of surgery in foot macrodactyly is to reduce the size of the foot so that it may be used in regular shoes and the appearance can be enhanced. Young people should have soft tissue reductions, epiphysiodesis, epiphysectomies, osteotomies, and other treatments. Adults⁴⁻⁸ are more prone to undergo shortening operations and arthrodesis. Surgical indications for ray amputation, as previously stated by Bulut et al., were metatarsal involvement, joint immobility, or involvement of several digits.⁹

Liposuction has been used in attempts to “debulk” the fatty adipose tissue in a very few previous studies. But none of the previous studies showed positive results.

In our study, we are introducing a ‘Modified Loub Job’ procedure. It’s a liposuction assisted debulking of the foot. In our case, liposuction assisted debulking was done in the left great toe. It’s a reconstructive procedure for congenital disorders. After performing the liposuction assisted debulking of the left great toe, the girth of the left great toe decreased by 1 cm. The assessment of the wound on the 4th post operative day showed healthy site with no signs of skin necrosis.

Conclusion

The Modified Lob Job was found to be a viable procedure for the initial staged treatment for foot macrodactyly. The term ‘Modified Loub Job’ was first introduced in this article.

Conflicts of interest: None

Authors’ contributions: All authors made contributions to the article

Financial support and sponsorship: None

Consent for publication: Taken

References

1. Barsky AJ. Macrodactyly. J Bone Joint Surg Am. 1967;49:1255-66.
2. Natarajan M, Dhua S, Garg C. Macrodactyly of lower limbs-an update. J Evol Med Dent Sci. 2016;5:3806-10.
3. Ozturk A, Baktiroglu L, Ozturk E, Yazgan P (2004) Macrodystrophialipomatosa: A case report. ActaOrthopTraumatolTurc 38: 220-223.
4. Tsuge K (1967) Treatment of macrodactyly. PlastReconstrSurg 39: 590-599.
5. Kelikian H (1974) Congenitaldeformities of the hand and forearm. Philadelphia: WB Saunders.
6. Kostakoglu N, Kayikcioglu A, Safak T, Ozcan G, Kecik A, et al. (1996) Macrodactyly: report of eight cases of a rare anomaly. Turk J Pediatr 38: 73-79.
7. Bertilli JA, Pigozzi L, Pereima M (2001) Hemidigital resection with collateral ligament transplantation in the treatment of macrodactyly: a case report. J Hand Surg 26: 623-627.
8. Tsuge K (1985) Treatment of macrodactyly. J Hand Surg 10: 968-969. Chen SH, Huang SC, Wang JH, Wu CT (1997) Macrodactyly of the feet and hands. J Formos Med Assoc 96: 901-907.
9. Bulut M, Karakurt L, Belhan O, Serbest S. Ray amputation for the treatment of macrodactyly in the foot:reportofthreecases. ActaOrthopTraumatolTurc 2011;45:458-462.