

PROSTHETIC LIMB BY CHOICE NOT BY FATE: AN EXPERIENCE FROM AMPUTATION CLINIC



Junaid Alam, Nida Mir, Chigurupati Vedasamhita, Altaf Hussain Mir, Pratyusha Priyadarshini, Sushma Sagar
Division of Trauma Surgery & Critical Care, JPN Apex Trauma Centre, All India Institute of Medical Sciences, New Delhi, India

Introduction

- Globally 57.7 million people undergo amputation
- Non traumatic amputees- approx. 54%
- Most common cause - vascular diseases
- Advanced Prosthesis



Elective amputation in compromised limbs



Improved QoL

Study Design

- Case series
- Site - Division. of Trauma Surgery and Critical Care, JPNATC, AIIMS, New Delhi
- Duration - 3 months from amputation
- Ethical clearance- IEC-34/07.02.2020,RP-05/2020 dated 13.03.2020
- Follow up - weekly till application of definitive prosthesis

Demographics and Diagnosis

Variable	Case X	Case Y	Case Z
Age	31	22	20
Gender	Female	Male	Female
Profession	Professional	Student	Student
Co-morbidity	No	Obese	No
Diagnosis	K/C/O Spina bifida with non healing trophic ulcer	K/C/O congenital amniotic bands with non healing trophic ulcer	Post surgery scar/contracture with elephantiasis

Pre Amputation Status



Case X

Case Y

Case Z

Patient's challenges before Amputation

Variable	Case X	Case Y	Case Z
Wound care	6 hourly	12 hourly	24 hourly
Daily dressing	Yes	Yes	Yes
Chronic foul smelling discharge	Yes	Yes	Yes
Measures for salvageability (*HbOT, VAC, Alternative Medicine)	Yes	Yes	Yes
Limb length discrepancy	No	No	Yes
Requirement for special footwear	Yes	Yes	Yes
Walking limitation	+	+++	++

Preoperative Planning

- Assessment of level of amputation
- Marking of stump length; choice of ideal stump length
- Suitable prosthesis procurement
- Preoperative exercise regime for both the limbs
- Simultaneous psychological counseling

Acknowledgement

- Div. of Trauma Surgery and Critical Care, Physiotherapy Unit, Wound care nurses, Medical social worker, Psychologist; JPNATC, AIIMS, New Delhi

Level of amputation marking

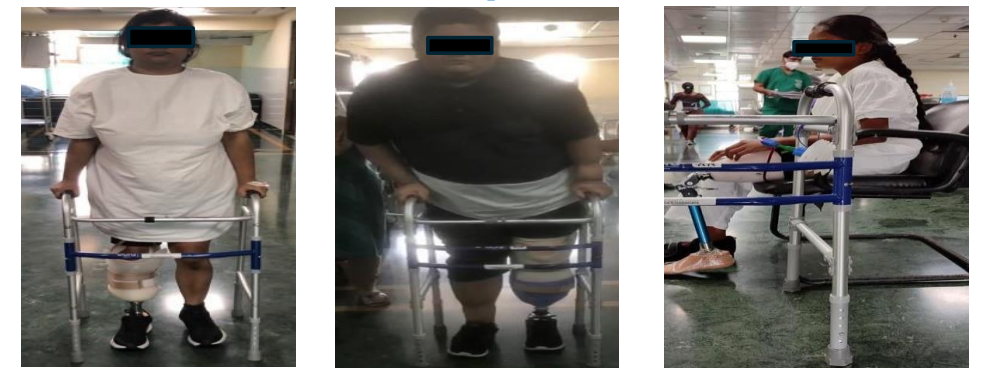


Case X BKA

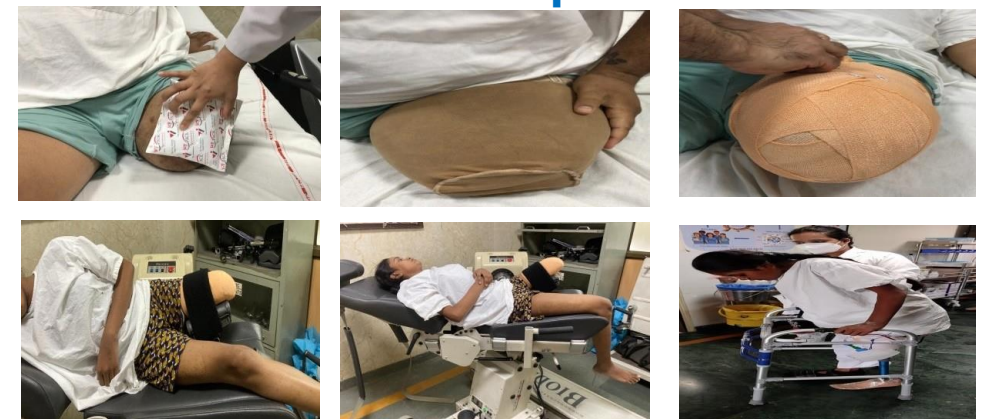
Case Y BKA

Case Z AKA

Immediate Post Operative Prosthesis



Rehabilitation protocol



Results

Variable	Case X	Case Y	Case Z
Stump ready for definitive prosthesis (weeks)	6 weeks 5 days	6 weeks 2 days	6 weeks
Definitive socket application (days)	12 days	9 days	20 days
LEFS			
• Pre amputation	30	26	40
• 6 weeks	56	54	43
• 12 weeks	72	65	59

Definitive Socket



Case X

Case Y

Case Z

Back to Office

Back to Medical College

Back to Optometric Lab

Discussion

- All the three patients were young and required amputation ≤ 35
- Elective amputation supported by IPOP in non trauma patients

Conclusion

- Advanced prosthesis in patients with compromised limb has a better prognosis and improved Quality of Life
- Young educated patients took more informed choice to amputate rather than living with a SCARRED Limb

References

- Graham L. Spina bifida and lower limb amputation in Northern Ireland: a retrospective study of demographics and outcome. *Prosthetics and Orthotics International*. 2017 Oct;41(5):503-6.
- Chin JW, Teague L, McLaren AM, Mahoney JL. Non traumatic lower extremity amputations in younger patients: an 11-year retrospective study. *International Wound Journal*. 2013 Feb;10(1):73-8.
- Linden E, Peers K, Kiekens C. Lower limb amputation for chronic pain and/or functional impairment. *Journal of Rehabilitation Medicine*. 2021;53(11).