

Spare The Limb And Spoil The Outcome: Why Do Some Osteosarcoma Patients Pursue Amputation Post LSS?

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Background

- There are ~1,000 new cases of osteosarcoma each year
 - Majority of cases in children and teens
 - Most commonly in lower limb
- Treatment includes:
 - Surgery
 - Chemotherapy and/or radiation therapy
- Surgical treatments: amputation, limb sparing surgery (LSS), rotationplasty (RP)
- In the past, limb sparing was not an option offered
- Innovation in flaps and endoprosthesis has allowed for more LSS and has become the gold standard of treatment
- However, some patients who undergo LSS may choose to transition to an amputation-type revision, including rotationplasty



Amputation



Limb Sparing Surgery (LSS)



Rotationplasty (RP)

Purpose

- Prior research has examined the psychosocial and physical outcomes, and overall satisfaction associated with secondary surgical interventions.
- Little is known about patient reported pain and other outcomes before and after secondary intervention.
- We wanted to determine motivating factors for decision to transition to amputation-type revision and whether those interventions better address those factors.

Methods

- The public Osteosarcoma Facebook group: "Osteosarcoma and Ewing's Sarcoma Support Group" was chosen.
- Posts containing "LSS," "Limb Sparing Surgery" "Amputation," "Rotationplasty," & "Pain" from June 1, 2021 through June 30, 2022 were selected.
- Posts regarding non-surgical osteosarcoma interventions, oncology, upper limb surgical intervention were excluded.

- Deidentified transcripts were uploaded to ATLAS.ti, coding software.
- Two investigators independently coded each posts and met to perform inductive analysis of codes.
 - Discrepancies were resolved with discussion.

Results

A total of 14 posts and 378 comments from the Osteosarcoma and Ewing's Sarcoma Support Group were analyzed. The following themes emerged:

Living with LSS

"I do have daily aches and pains, as does probably everyone on this page regardless of what treatment they had."

"I am finding as a long-term survivor I have back issues associated with the difference in my gait, etc - but again I expect someone with long term RP or amputation also struggles with it or something similar."

"I enjoyed a very functional, pain free limb that came at the cost of many revisions."

"I'm 43 and have had LSS for about 30 years. I've had several revisions, implant failures of all kinds."

"He's 7 so it's hard and he can't just 'force through the pain'."

Regret Associated with LSS

"We went with the limb salvage but I wish we would have done the rotationplasty. We left it up to our son and he didn't want to loose his leg. He will have to replace the implant when he's about 30. He's 11 now."

"I wish I would have done rotationplasty. I was an athlete and not being able to run and have mobility like I used to has made things really difficult. Just yearly with the cold (where I live) I have so many issues with my leg and knee feeling extremely tight and stiff and almost unable to walk sometimes"

"His right leg has poor range of motion and bothers him enough that he's looking into rotationplasty or amputation sometime in the future."

"29 year survivor, lss. If you want to stay active, I'd go for amp. That being said, make sure you can get access to really good prosthetics."

Concerns Associated with Amputation/Rotationplasty

"In a way i believe it might make it easier on me as my lss made me have a drop foot and i have to wear a brace 24/7 but another part of me just doesn't know if amputation would be right for me."

"Most Dr view amputation as a last choice, so I would think that if they suggested that, it's because they must think it's the best option."

Amputation/Rotationplasty Experience

"Consider rotationplasty if it is an option. My son can do just about everything he did before. He skis, plays football, basketball and tennis."

"I personally had an at hip amputation I didn't have the options but the people I do know who have had limb salvage have had major issues one now can't move her foot the other friend is now debating amputation due to pain"

LSS to Amputation/Rotationplasty Experience

"I am way less disabled with a prosthetic as opposed to the limb salvage I had."

"Even though I can't get the x3 I am way less disabled with a prosthetic as opposed to the limb salvage I had."

"Limb salvage taking a long time and being very painful and then still getting a amputation."

"I don't regret the LSS but in retrospect, I would not have continued to have as many revisions before having an amputation."

Conclusions

- LSS can result in significant pain and negative impact on quality of life.
- As a result, some patients choose alternative treatments, like amputation and rotationplasty.
- Future work is needed to understand how to better counsel patients on these life-saving and life-changing procedures.

References

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