Colorectal Disease

ORIGINAL ARTICLE

Application of nanofat for treatment of traumatic faecal incontinence after sphincteroplasty – A pilot study

Goran Barisic, Katarina Andjelkov, Jovana Rosic, Marko Miladinov, Jelena Kotur-Stevuljevic, Tanja Dinic, Jelenko Jelenkovic, Zoran Krivokapic

First published: 15 April 2022 | https://doi.org/10.1111/codi.16148

Abstract

Aim

The aim of this study was to investigate whether the application of nanofat containing stem cells improves continence in women who had previously undergone anal sphincteroplasty with unsatisfactory long-term outcomes.

Method

This prospective pilot study included nine women with various degrees of anal incontinence who had previously undergone anal sphincteroplasty due to obstetric trauma. In all patients, the Wexner Incontinence Score (WS) and Faecal Incontinence Quality of Life Score (FIQLS), as well as anal manometry and endoanal ultrasound measurements, were performed before the procedure and during follow-up. In all patients, liposuction was performed and 50 ml of raw lipoaspirate was obtained and processed using a NanoFat Kit device. Approximately 20 ml of the mechanically emulsified and filtrated fat was obtained and the anal sphincter complex was infiltrated with it. Patient follow-up was conducted in person or via telephone 6 and 12 months after the procedure.

Results

The squeeze pressure was significantly increased 6 months after the procedure ($p = 0.01$). The external anal sphincter measured at the 12 o'clock position was significantly thicker ($p = 0.04$). A significant decrease in the WS was observed both 6 and 12 months after the procedure compared with baseline values ($p < 0.05$ for both).

Conclusion

This study is the first to show that the application of nanofat as an injectable product improves continence in patients with unsatisfactory results after sphincteroplasty, suggesting it to be a promising and effective therapeutic tool. The procedure is safe and can be easily performed as an ambulatory procedure.

CONFLICT OF INTEREST

The authors declare that there have no conflicts of interest.

Open Research

Supporting Information

REFERENCES

Volume 24, Issue 9
September 2022
Pages 1054-1062