

Autologous platelet-rich plasma (Obsidian RFT®) in complex anal fistula treatment – getting it right?

preliminary study data from 80 patients with promising clinical data

Christof Ihle, Thomas Hallgren and Antoni Zawadzki, Sweden

Background

Further development of sphincter-preserving techniques in the treatment of complex anal fistula disease is needed.

Objective

To study anal fistula closure achieved exclusively with autologous platelet-rich plasma in a large cohort.

Design

Retrospective cohort study.

Settings

Referral center for anal fistula disease in the County of Varmland, Sweden.

Patients

Cohort of 80 consecutive patients with complex anal fistulas representing a real-world scenario at a referral center between October 2021 and June 2025. Patient age was from 14 to 72 years. No patient group or fistula-type was excluded.

Intervention

Treatment sequence:

- Clinical fistula and incontinence evaluation including endoanal 3D-ultrasound at surgical outpatient clinic
 - Outpatient surgery fistula exploration including endoanal 3D-ultrasound and seton placement
 - Outpatient surgery fistula closure with autologous platelet-rich plasma after three months
 - Follow up at surgical outpatient clinic with clinical examination, endoanal 3D-ultrasound and incontinence evaluation after three months
- Endoanal 3D-ultrasound has completely replaced MRI in this setting.

Main Outcome Measures

Primary outcome was healing rate, assessed both clinically and with endoanal 3D-ultrasound. Secondary outcomes were complication rate, anal continence and whether or not patient age has effect on the healing rate.

Results

Fistula healing was achieved in 61% of patients after a single closure-operation. 8% of patients healed after a second closure-operation and a further 5% of patients after a third procedure. No complications or postoperative anal incontinence were detected.

Logistic regression analysis showed that age is a weak predictor of healing outcome in this dataset. Although a slight negative trend with increasing age is observed, it lacks statistical significance.

Limitations

The study is retrospective and there was no control group. All patient contacts and operations were carried out by a single surgeon.

Conclusions

The technique is relatively easy to learn, safe and effective. Because of its very low destructiveness it can be repeated easily until healing is achieved. 61% of patients were cured after one closure-operation. 74% after one or two additional closure-operations. These are very promising results in a difficult-to-treat patient group.

Patient demographics and fistula type

Cohort	n=80
Age	14 to 72 years (median 42)
Gender	females n=39 males n=41
BMI	15 to 44 (median 27)
Diabetes mellitus	n=9 (11%)
Fistula type	
Cryptoglandular	n=55 (69%)
Crohn´s anal fistula	n=21 (26%)
Other*	n=4 (5%)
Rectovaginal fistulas	n=6 (7.5%)
High transsphincteric (upper 2/3 of sphincter complex)	n=44 (55%)
Low transsphincteric (lower 1/3 of sphincter complex)	n=24 (30%)
Intersphincteric (ventrally in female patients)	n=5 (6%)
Extrasphincteric	n=1 (1%)

*obstetric or in conjunction with J-pouch or ileoanal anastomosis

Summary

This cohort describes the outcome of 80 consecutive patients treated at a referral center.

Autologous platelet-rich plasma was the exclusive treatment.

Endoanal 3D-ultrasound has completely replaced MRI in this setting.

No patient group was excluded. 61% of patients were cured after one closure-operation. **74%** were cured after one or two additional closure-operations. These are very promising results in a difficult-to-treat patient group.