

CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE
CONTROVERSIES & UPDATES IN VASCULAR SURGERY

FEBRUARY 7-9, 2019



MARRIOTT RIVE GAUCHE & CONFERENCE CENTER, **PARIS, FRANCE**

Percutaneous declotting of thrombosed AVF: Mechanical

UNIVERSITY
OF CENTRAL
LANCASHIRE



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NHS Foundation Trust





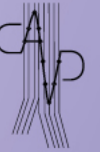
Disclosure

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I have the following potential conflicts of interest to report:

****Love of the french accent****

No conflict of interest.



Thank you to World Experts for collaborative work and enthusiasm for AVF declotting:

Prof. A. MassMann Homburg, Germany

Prof. K. Madassery Chicago, USA

Dr. C. Marcelin Bordeaux, France

Dr. A. Alvi Rhiyad, KSA

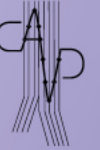
Dr. O. Bashir Rhiyad, KSA

Prof. J Van Den Berg Switzerland



Clot only?

- Secondary complication of **underlying stenosis**
- Systemic problem such as dehydration, clotting disorder, cardiac output issues, recent hospital admission: surgery/ICU
- Leads to partial or complete occlusion of the AVF with clot.
- Limited or non functional dialysis



Management Pathway:

Do nothing

Place tunnelled line or central line for dialysis

Surgical management: Direct embolectomy/new AVF

Systemic medication: heparin or warfarin

Balloon maceration and fistuloplasty

Percutaneous Lysis: catheter lysis and pharmo-mechanical lysis.

Manual aspiration of clot via catheter or sheath

Mechanical thrombectomy



AVF Service

- *Angio-Room

- *Dialysis care team: Nurses, renal physicians, other health care professionals.

- *Patient education.

All acutely clotted AVF managed within 3 days of presentation. More than 80% within 24 hours.

All scanned and planned at presentation.



USS/ Doppler check of clot, anastomosis, and puncture site.

Correct arm board, C-arm set up, and patient comfort. Depending on clot position a pressure cuff maybe placed to reflux contrast into the artery.

Analgesia: fentanyl/Midazolam I.V

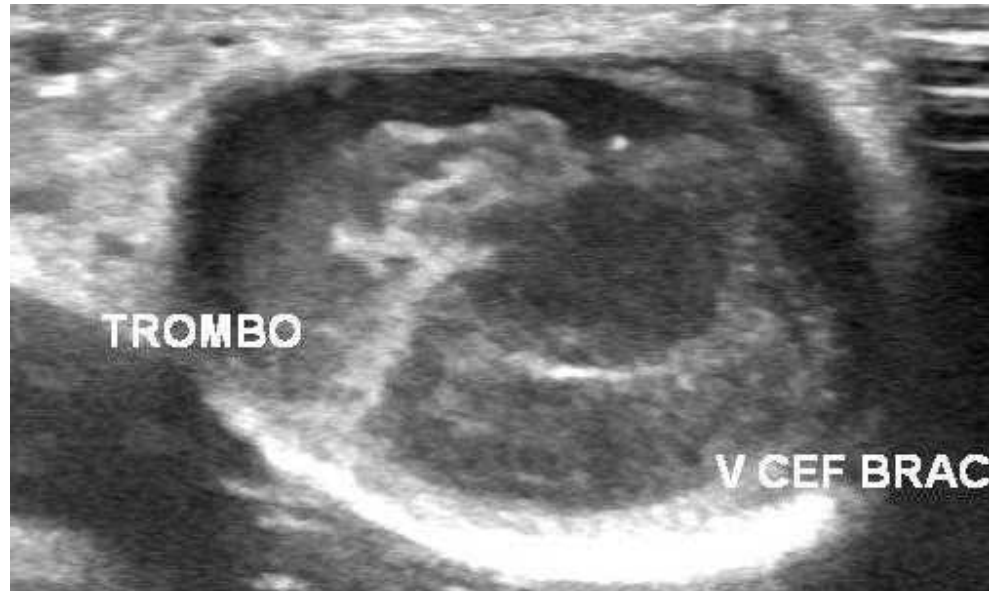
Local anaesthetic: 1% Xylocaine s/c

Puncture: Access (single or more)

I like short sheaths if access can be obtained from the AV vein (Merit medical).

If neck access IJV then longer sheaths.

I do not use arterial access





Access:

Merit short sheaths

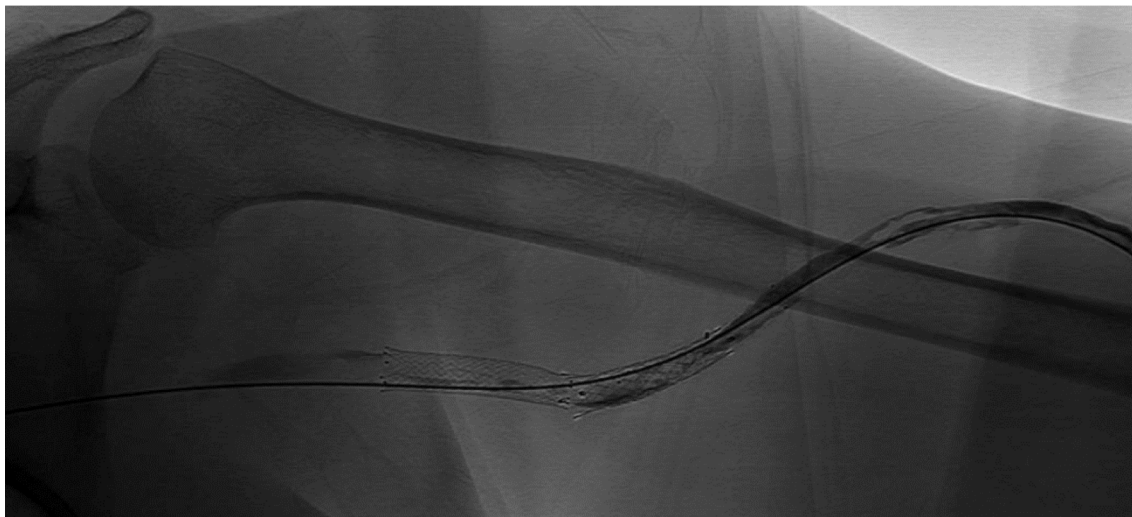
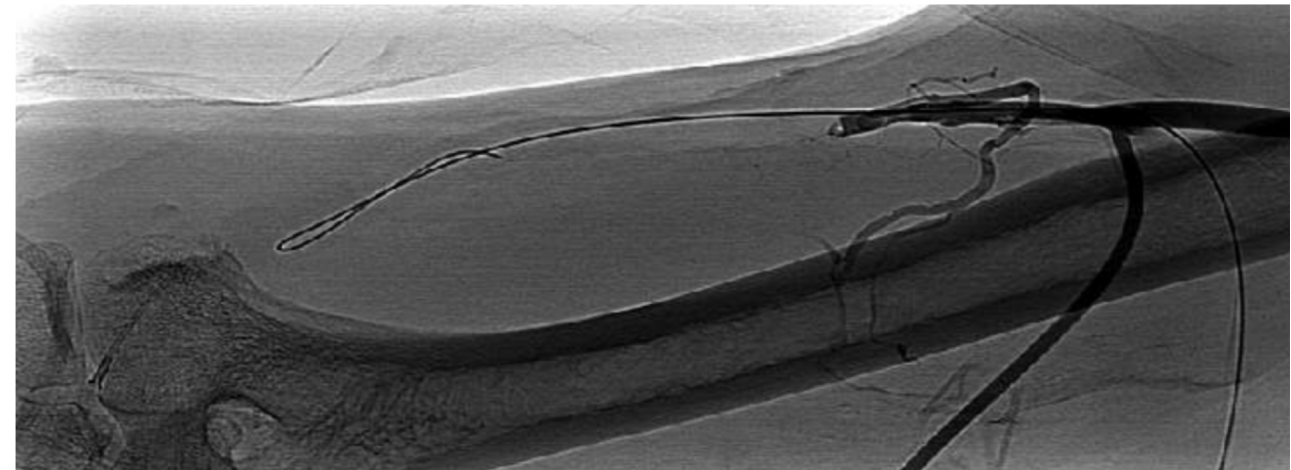
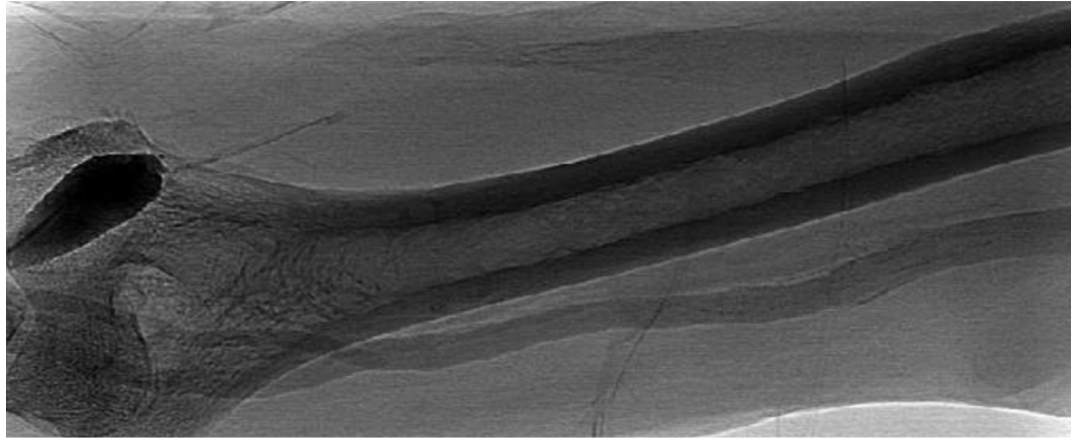


Double punctures of AVF, to clear up and down stream clot



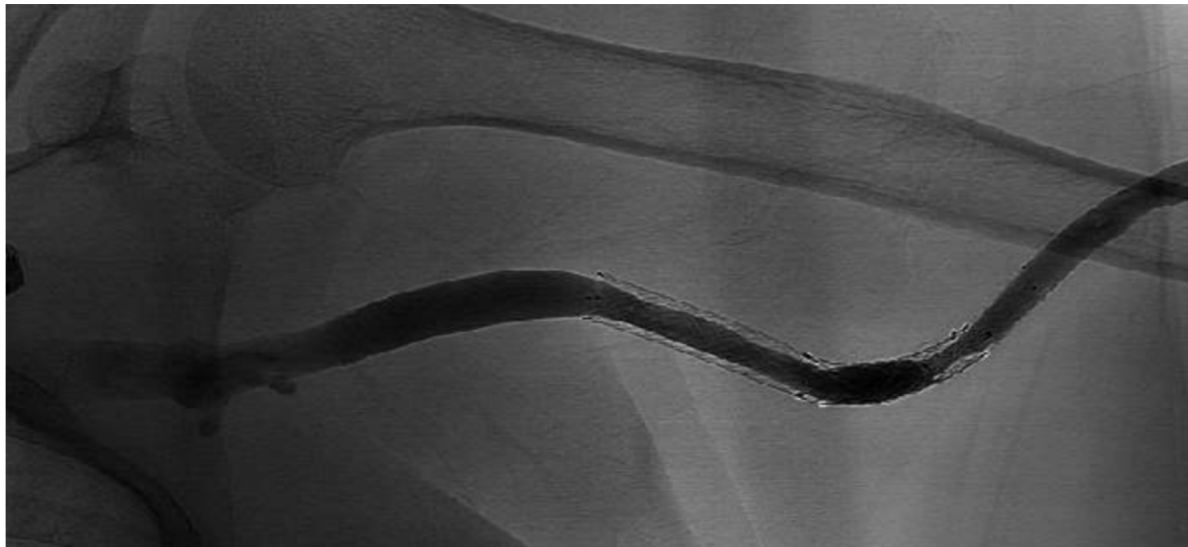
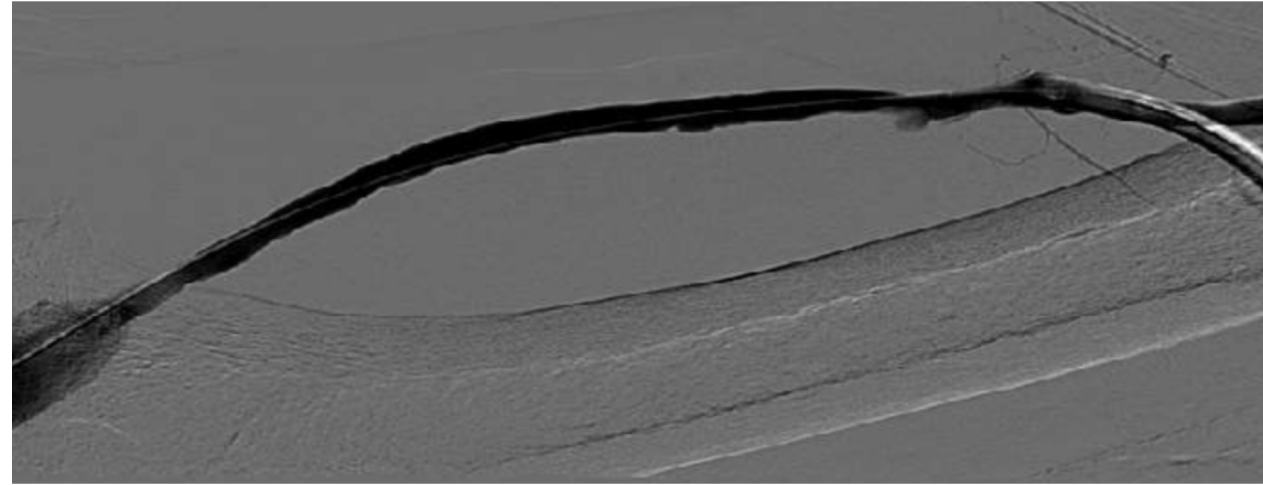
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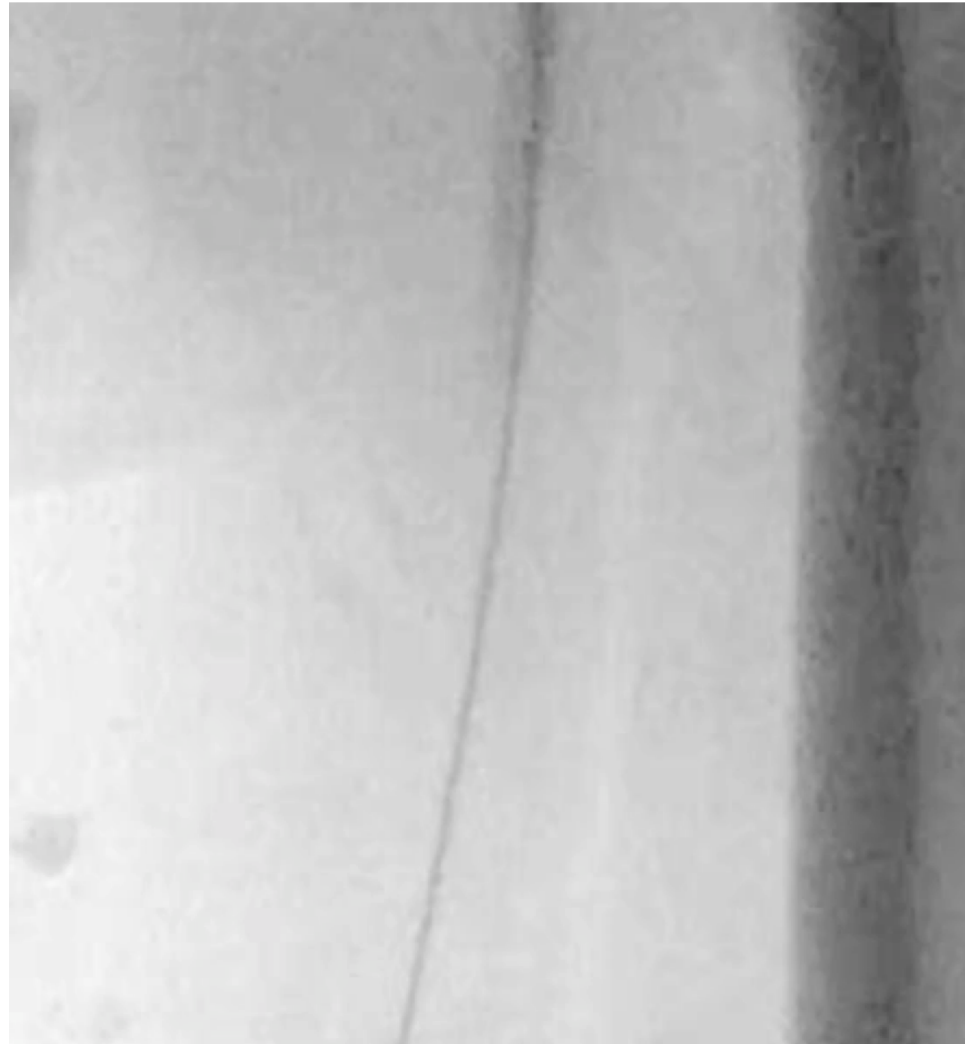
Aspirex 6-8-10 Fr Straub Medical

Rotational mechanical thrombectomy with aspiration. No lysis required.



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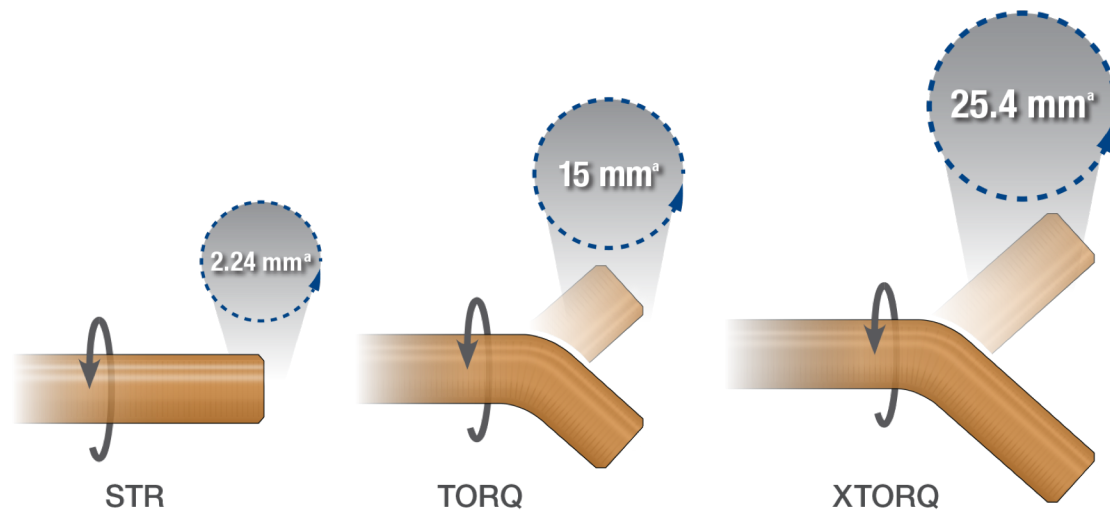


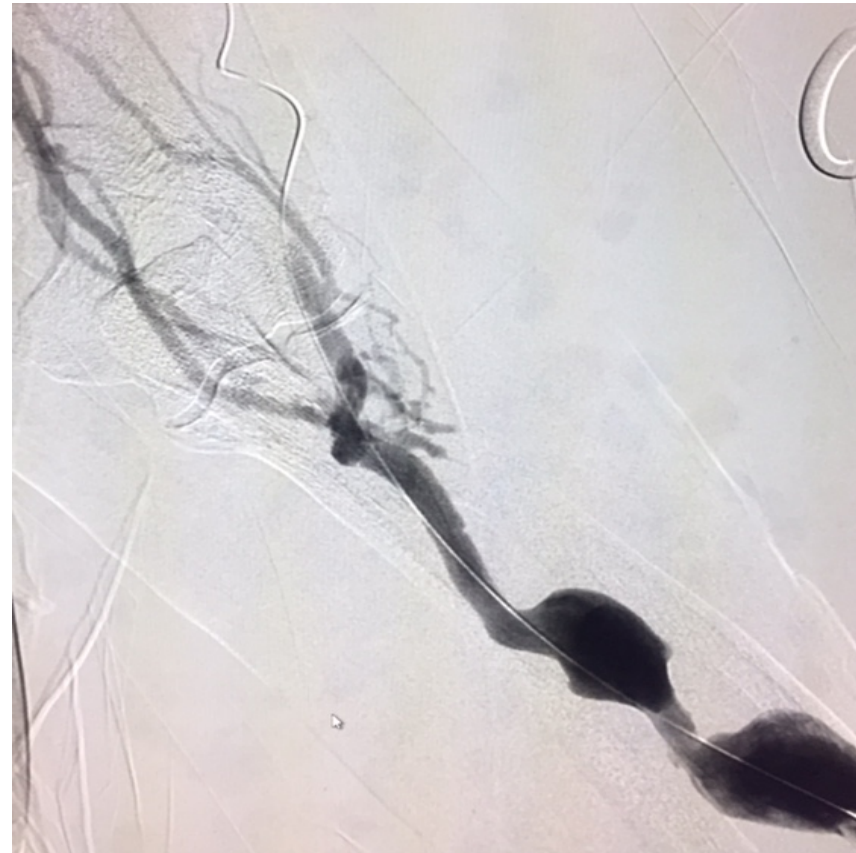
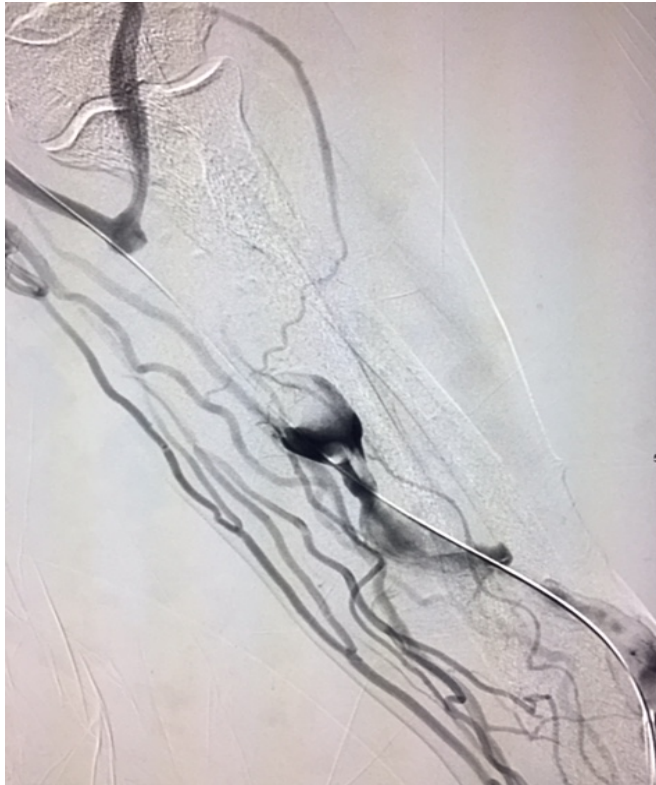
Vessel diameter 5 - 8 mm
Subacute and chronic occlusions



Indigo CAT 6, 8 CAT D, CAT3 (immature and anastomosis)

Manipulation of tip in aneurysmal segments







Haemostasis:
Manual compression
Suture
Temporary suture
Leave sheath In for Dialysis





Total running costs:

Surgical embolectomy	£15,000
Thrombolysis complications	£10,000
Pharmaco-mechanical	£7,000 + complications
Mechanical aspiration	<£5,000

Cost of complications such as intra-cranial bleed??



Endovascular approach:



less infection rates



No scarring



No overnight admission. Discharge same day. Able to have dialysis after procedure.



Less staff required, no theatre space need, no anesthetic set up.



Patient preference



Able to also treat underlying cause at same time as removing clot.

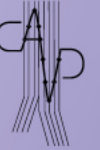


Local anaesthesia +/- conscious sedation only



Conclusion

- AV Fistula for renal failure patients remains a popular and successful tool for dialysis access.
- Early prevention and intervention is likely to maintain its long term success. New technology such as mechanical aspiration for thrombosis is proving to be successful. More trials are needed to assess this and in particular the risks of TPA/lysis in this patient group.
- Having a system in place for clinicians and patients to pick up early complication signs and follow up post treatment are paramount and should be available in any trust providing this service to ensure success.
- Patient comfort during procedures and education throughout this journey are vital tools for compliance and patient satisfaction.



THANK YOU 😊

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