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Functional Outcomes after Medial Patellofemoral Ligament Reconstruction are Influenced by Body Mass Index

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Aim

To determine if BMI affect the outcomes of patients undergoing MPFL reconstruction

Methods

- **Single-centre, prospective database RJAH, Oswestry**
- **Retrospective review, 2015-2019**
- **Clinical efficacy Kujula, IKDC, EQ-5D**
- **Complication/Dislocation rate**
- **Analysis using linear, curvilinear, and segmented models following propensity-score weighting**

Results

- **97 patients (97 Knees, mean age 25y)**
- **61 patients - BMI <30kg/m^2 (mean age 23y, BMI 24)**
- **36 patients - BMI >30kg/m^2 (mean age 27y, BMI 36)**
- **Re-dislocation rate was 0% in each BMI group**
- **Both groups had significantly improved Kujula, IKDC, EQ5D, above the MCID of 20.5**

- **BMI had an inverted J-shaped association**
- **Peak outcomes found at BMI – 20.5 (95% CI 18.5 to 22.4)**
- **No evidence for an association between BMI and complication risk was found**

Conclusion

- **BMI influences functional outcomes in MPFL-R with an inverted J-shaped relation without evidence it affected the complication or re-dislocation rate**

- **In the absence of patella alta and severe trochlear dysplasia, an isolated MPFL reconstruction is a safe and effective procedure to treat patellar instability, with the best functional outcome in patients with a BMI around 20 to 21**

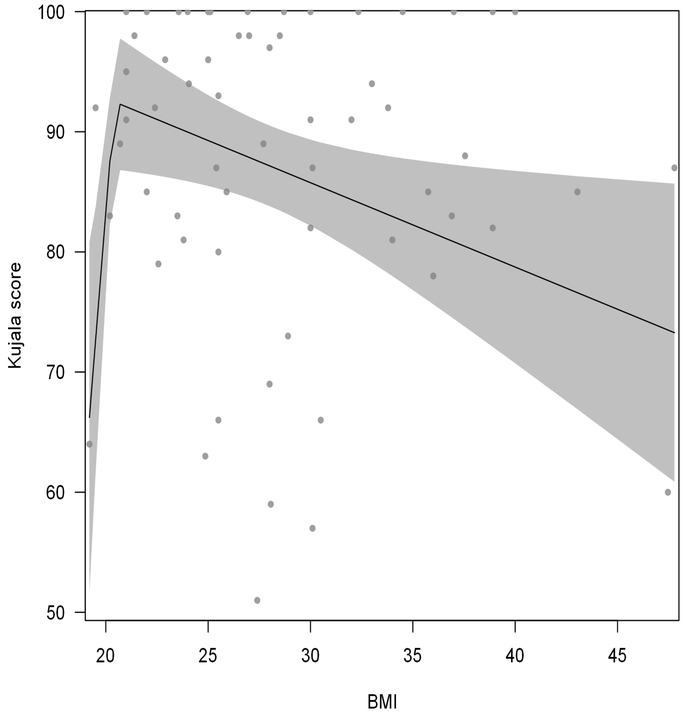

Fig. 3a Kujala score

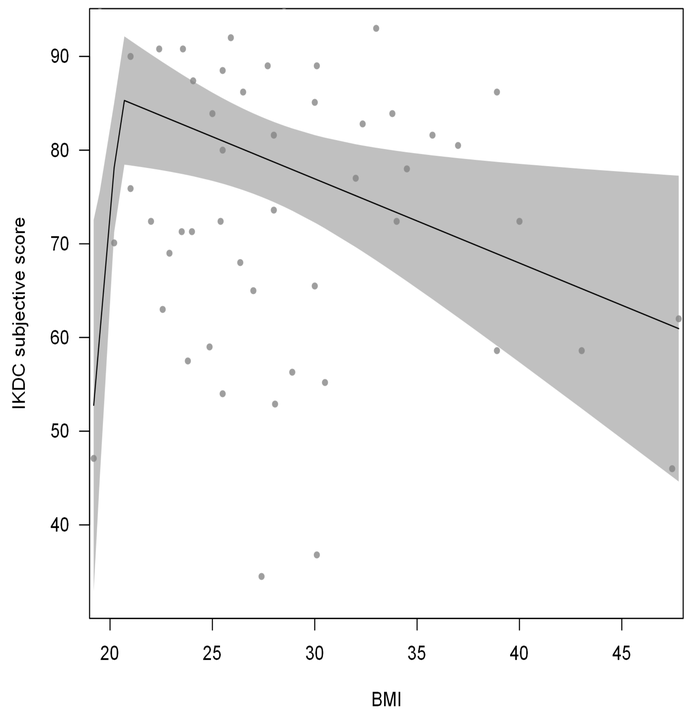

Fig. 3b IKDC score

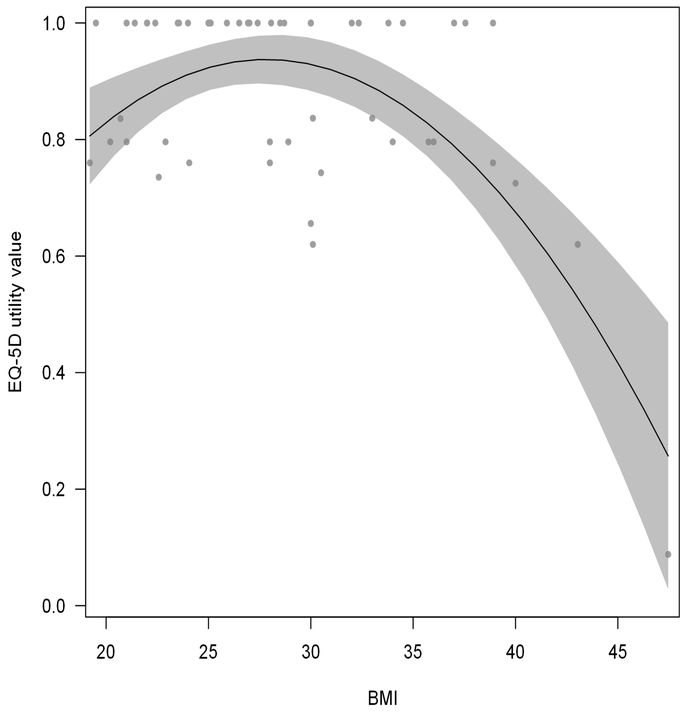

Fig. 3c EQ-5D index

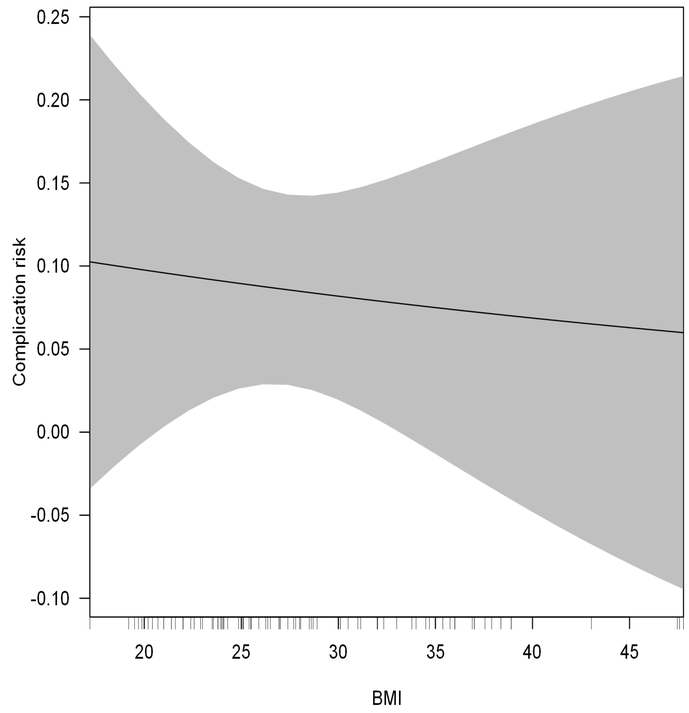

Fig. 3d Complication risk

Declarations:

- **Conflict of interest:** None to declare
- **Funding:** None to declare
- **Ethical approval:** This study has been approved by our Trust's Research Committee**.**
- **Informed consent**: Not required
- **Acknowledgements:** None to declare

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