Predictive Value of MRI Geometric Parameters to the Surgical Complexity of Pelvic Fracture Urethral Stricture

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**Objectives**
To investigate the value of MRI in predicting surgical complexity and procedure of PFUI.

**Methods**
Retrospectively
January 2016 to December 2018
43 male patients with PFUI

<table>
<thead>
<tr>
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<th>Simple Perineal Approach</th>
<th>Inferior Pubectomy</th>
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<tbody>
<tr>
<td>Patient Number (%)</td>
<td>27 (62.8)</td>
<td>16 (37.2)</td>
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<td>Age (SE)</td>
<td>45.4 (2.4)</td>
<td>39.2 (2.6)</td>
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<tr>
<td>BMI (SE)</td>
<td>22.1 (0.4)</td>
<td>23.2 (0.7)</td>
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</tbody>
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With geometry, gap distance (GD) and pubourethral vertical distance (PUVD) was measured.

Construct a triangle with these three vertices.
Results

- ROC curve: Area under the curve: $0.876$ (GD) ; $0.704$ (PUVD)

- Distance between the rectum and injured urethra with or without rectal injury: $13.80$ Vs $17.81$ mm

Conclusion

- MR urethrography combined geometry can evaluated the exact situation of PFUI

- When patients get longer gap distance and shorter vertical distance, inferior pubectomy is more likely to be performed