ANATOMY OF THE PRESACRAL SPACE

STRUCTURES TO BE RESPECTED FOR A SAFE FIXATION OF THE MESH

RATE OF BLOOD TRANSFUSION 0.2%

ANATOMICAL VARIATIONS OF THE LEFT COMMON ILIAC VEIN/MIDDLE PART PROMONTORY

- Distances between the left common iliac vein and the midsacral promontory:
  - **Dissection of 52 cadavers**
    - Mean of $d_1 = 27 \text{ mm}$ (9 - 52)
    - Mean of $d_2 = 22 \text{ mm}$ (9 - 35)

Wälsander CK, et al
Vascular anatomy of the presacral space in unembalmed female cadavers
American journal of obstetrics and gynecology 2006, 195: 1736
**ANATOMICAL VARIATIONS OF PRESACRAL VESSELS / MIDDLE PART PROMONTORY**

- **Presacral vessels:**
  - **Middle sacral vein**
    - Ø = 2mm (1-4)
    - double (80%)
    - left to P= 33%
    - right to P= 52%
    - crossing P= 5%
    - mean of d3 = 7 mm (0-17)

Wieslander CK. et al
Vascular anatomy of the presacral space in unembalmed female cadavers
American journal of obstetrics and gynecology
2006, 195: 1736

- **Presacral vessels:**
  - **Middle sacral artery**
    - Ø = 2mm (1-4)
    - Left to P= 62%
    - Right to P= 30%
    - Crossing P= 8%
    - Mean of d4 = 4 mm (0-15)

Wieslander CK. et al
Vascular anatomy of the presacral space in unembalmed female cadavers
American journal of obstetrics and gynecology
2006, 195: 1736
ANATOMICAL VARIATIONS OF PRESACRAL VESSELS / MIDDLE PART PROMONTORY

→ Dissection right to the medline = safer

• Presacral space: **vascular areas**

• Overlay of vascular structures

• (10 cadavers)

Flynn MK. et al
Vascular anatomy of the presacral space: a fresh tissue cadaver dissection
American journal of obstetrics and gynecology
2005, 192: 1501

ANATOMICAL VARIATIONS OF THE RIGHT URETER / MIDDLE PART PROMONTORY

• Distances between the right ureter and the midsacral promontory:
• Dissection of 10 cadavers

<table>
<thead>
<tr>
<th>Brad</th>
<th>Right ureter</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>28 (7) [13-36]</td>
</tr>
<tr>
<td>B</td>
<td>32 (7) [22-42]</td>
</tr>
<tr>
<td>C</td>
<td>34 (7) [25-45]</td>
</tr>
</tbody>
</table>

Flynn MK. et al
Vascular anatomy of the presacral space: a fresh tissue cadaver dissection
American journal of obstetrics and gynecology
2005, 192: 1501
RISK OF URETERAL INJURY < 1/1000

- Prévention
  - Parietal Uretera
    - Cross between right extern iliac artery and uterine artery
  - Visceral Uretera
    - Behind the ligaments
    - Under the bladder
    - In contact with the bladder

- Treatment
  - Per-op:
    - Per-op Bleu carmin en IV
    - Uretéral Catheter
  - Post-op
    - Uro-scanner
    - JJ Ureteral

ANATOMICAL VARIATIONS OF THE SUPERIOR HYPOGASTRIC PLEXUS

- SHP: sympathetic plexus connected to IHP

Shiozawa T. et al
Nerve-preserving sacrocolpoopexy: anatomical study and surgical approach
European journal of obstetrics and gynecology and reproductive biology, 2010, 152: 103
ANATOMICAL VARIATIONS OF SUPERIOR HYPOGASTRIC PLEXUS

- Right hypogastric nerve:
- Mean of \(d_6 = 7\text{ mm}\) (0 - 17)

Wieslander CK. et al
Vascular anatomy of the presacral space in unembalmed female cadavers
American journal of obstetrics and gynecology 2006, 195: 1736

ANATOMICAL VARIATIONS OF LVCA

- Fixation into the anterior longitudinal ligament
• Fixation into the anterior longitudinal ligament and **NOT** into the disc

Boukkerou M. et al.  
Promontofixation procedures: use of non-absorbable sutures  
Journal de gynécologie obstétrique et biologie de la reproduction  
2003, 32: 54

• Staples go deep into the bone

Boukkerou M. et al.  
Promontofixation procedures: use of non-absorbable sutures or tackers?  
Journal de gynécologie obstétrique et biologie de la reproduction  
2003, 32: 54
The anatomical point of view for the safest procedure:

1. To open the peritoneum tigh-it
2. Dissection on the right side of the mid-sacral ligament
3. Repair carefully the vessels and the Right ureter
4. Try to preserve the right hypogatsric nerve
5. Fix your needle 1 cm below the promontory