ENDOSCOPIC PARATHYROIDECTOMY

J.F. HENRY
Department of Endocrine Surgery
University Hospital la Timone
Marseilles, France

8th Postgraduate Course in Endocrine Surgery
September 21-24, 2006
Heraklion, Crete-Greece
ENDOSCOPIC PARATHYROIDECTOMY

- Small tumors
- Benign tumors
- No surgical reconstruction
ENDOSCOPIC PARATHYROIDECTOMY
PREREQUISITE CONDITIONS

1- The surgeon must be experienced in conventional parathyroid surgery and trained for endoscopic neck procedures.

2- The patient must be carefully selected.

3- The adenoma must be clearly localized.
PATIENTS ELIGIBLE FOR ENDOSCOPIC PARATHYROIDECTOMY

• No goiter

• No previous neck surgery

• Sporadic HPT I
MINIMALLY INVASIVE PARATHYROIDECTOMY

Role of Parathyroid imaging

1 - Select the patient: single gland disease

2 - Localize the hyperfunctioning gland
   Right/Left
   Superior/Inferior
   Posterior/Anterior
PARATHYROID IMAGING

- UTRASONOGRAPHY
- SESTAMIBI
- SINGLE ADENOMA
ULTRA SONOGRAPHY + SESTAMIBI SCAN

- NO OR UNCLEAR LOCALIZATION
  - CONVENTIONAL CERVICOTOMY
ULTRA SONOGRAPHY + SESTAMIBI SCAN

- CLEAR POSITIVE LOCALIZATION
  - POSTERIOR
  - ANTERIOR
- NO OR UNCLEAR LOCALIZATION
  - CONVENTIONAL CERVICOTOMY
ULTRA SONOGRAPHY + SESTAMIBI SCAN

CLEAR POSITIVE LOCALIZATION

POSTERIOR

LATERAL ACCESS

ANTERIOR

NO OR UNCLEAR LOCALIZATION

CONVENTIONAL CERVICOTOMY
ENDOSCOPIC/CONVENTIONAL PARATHYROIDECTOMY (98-2005 / 970 HPT I)

- Conventional: 44.5% (432)
- Endoscopic: 55.5% (538)
## CONTRAINDICATIONS FOR E.P.

432/970 : 44.5 %

- Associated nodular goiter 174
- No preoperative localization 107
- Previous neck surgery 71
- Suspicion of MGD 45
- Acute HPT 8
- Large tumor 7
- Local anesthesia 9
- Major ectopia 9
- Spontaneous neck hematoma 2
Left superior (P4) Adenoma
Posteriorly located
RESULTS

- Conversions: 13.2%
- Operative time: 48' (16'-130')
- Complications
  - hematoma in sternocleidomastoid: 3
  - definitive recurrent nerve palsy: 1
  - capsular disruption: 10
- Persistent HPT: 3
- Recurrent HPT: 1
<table>
<thead>
<tr>
<th>Conversion</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missed adenoma</td>
<td>18</td>
</tr>
<tr>
<td>Difficulties of dissection</td>
<td>16</td>
</tr>
<tr>
<td>QPTH assay true negative*</td>
<td>18 *</td>
</tr>
<tr>
<td>QPTH assay false negative</td>
<td>4</td>
</tr>
<tr>
<td>Sestamibi false positive</td>
<td>11</td>
</tr>
<tr>
<td>Ultrasonography false positive</td>
<td>4</td>
</tr>
</tbody>
</table>

* 18 multiglandular diseases
ENDOSCOPIC PARATHYROIDECTOMY

• Why?

• Mini-Open or Endoscopic?

• Central or Lateral approach?
WHY CONSIDER ENDOSCOPIC PARATHYROIDECTOMY?

- To reduce mortality?
- To reduce morbidity?
- To reduce operative time?
- To reduce hospital stay?
- To reduce costs?
- To reduce patient discomfort?
- To reduce wound morbidity?
ENDOSCOPIC / CONVENTIONAL PARATHYROIDECTOMY

- Less post-opérative pain
- Better cosmetic result

ENDOSCOPIC PARATHYROIDECTOMY

• Why?

• Mini-Open or Endoscopic?

• Central or Lateral approach?
MINI-OPEN PARATHYROIDECTOMY
MINIMALLY INVASIVE PARATHYROIDECTOMY
OPEN OR ENDOSCOPIC?

• Compared with other open minimally invasive procedures, endoscopic exploration allows better identification of anatomical structures.

• The endoscope provides a greatly magnified view with a much better illumination than one can obtain with other open procedures, even using a pair of magnifying loops and a headlight.
ENDOSCOPIC PARATHYROIDECTOMY

- Why?

- Mini-Open or Endoscopic?

- Central or Lateral approach?
ENDOSCOPIC PARATHYROIDECTOMY

Central access

Lateral access
ENDOSCOPIC PARATHYROIDECTOMY

• Endoscopic Parathyroidectomy should be proposed in carefully selected patients.

• The endoscopic technique has the main advantage of offering a magnified view and a light that permit a safe dissection.

• The lateral approach is particularly suitable for adenomas posteriorly located in the neck.