Osteoarthritis of the Hip

Diagnosis must precede treatment

George Hartofilakidis
Required Knowledge

- Classification of OA of the hip
- Natural history of the different types
A Classification System to be effective must:

- Include all types
- Easy to remember
- Accurate-logical
- Reproducible
Osteoarthritis of the Hip Classification

- Idiopathic
- Secondary, mainly to congenital hip disease
PRIMARY

IDIOPATHIC
Osteoarthritis of the Hip

Epidemiology
## Classification of 660 Hips with Osteoarthritis

<table>
<thead>
<tr>
<th>Type</th>
<th>n. of Hips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secondary to CDH</td>
<td>356 (54%)</td>
</tr>
<tr>
<td>Idiopathic</td>
<td>272 (41%)</td>
</tr>
<tr>
<td>Uncertain</td>
<td>32 (5%)</td>
</tr>
</tbody>
</table>
Race and OA of the Hip

- Secondary OA more common in oriental people
- Idiopathic OA more common in Caucasian people
Osteoarthritis
Idiopathic

- Eccentric

- Concentric
Eccentric OA

Rapid Deterioration
Concentric OA

Slow Deterioration
Eccentric OA
Eccentric OA
Idiopathic Osteoarthritis of the Hip: Incidence, Classification and Natural History of 272 cases.

G. Hartofilakidis, Th. Karachalios

Orthopedics, February 2003
<table>
<thead>
<tr>
<th>Type</th>
<th>n. of Hips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eccentric</td>
<td>218 (80%)</td>
</tr>
<tr>
<td>Concentric</td>
<td>54 (20%)</td>
</tr>
</tbody>
</table>

Idiopathic Osteoarthritis

n= 272
Onset of Symptoms
(mean age)

- Idiop. OA (272 hips) 61 yrs
- Cong. Disease (356 hips) 35 yrs
First Message

Idiopathic Osteoarthritis does exist and is frequent
Second Message

The two main types of Idiopathic Osteoarthritis are:

Eccentric and Concentric
Third Message

✓ Eccentric OA is of bad prognosis
✓ Concentric OA has a better prognosis
Osteoarthritis of the Hip
Secondary

- Congenital hip disease
- Osteochondritis
- Slipped capital epiphysis
- Avascular necrosis
- Trauma
- Others
Slipped Upper Femoral Epiphysis
Legg-Perthes-Calve disease
Idiopathic Avascular Necrosis
Congenital Hip Disease (CHD)
Congenital Hip Disease (CHD)

Stanisavlgenic and Mitelev
Arnold et al.
Robin et al
Harris and Stulberg
Wedge and Wasylenko
Walker
Thomas et al
Hartofilakidis et al

JBJS Am 1963
JBJS Am 1964
Am J Publ Health 1973
JBJS Am 1973
Clin Orthop 1978
JBJS Am 1978
JBJS Am 1982
JBJS Am 1996
Classification of Congenital Hip Disease in Adults
Eftekhar 1978
Crowe et al 1979
Hartofilakidis 1988
Hartofilakidis et al
Classification

✓ Dysplasia
✓ Low dislocation
✓ High dislocation
Classification

☑ Better communication
☑ Planning of the treatment
☑ Evaluation of results
The Hartofilakidis et al CHD Classification system

- JBJS 70-B, 1988
- JBJS 78-A, 1996
- JBJS 80-A, 1998
- Orthopedics 23, 2000
- Surgical Techniques in Orthopedics and Traumatology, 2000
- JBJS 86-A, 2004
Type A - Dysplasia

The femoral head is contained within the original acetabulum
Hip Dysplasia

1. Segmental deficiency of the superior wall (roof)
2. Osteophyte covers the fossa (secondary shallowness)
Type B – Low Dislocation

The femoral head articulates with a false acetabulum that partially covers the true acetabulum.
Low Dislocation

1. Anterior and posterior segmental deficiency
2. Narrow opening
Type C – High Dislocation

The femoral head is migrated superiorly and posteriorly to the hypoplastic true acetabulum.
High Dislocation

1. Segmental defect of the entire periphery. Inadequate depth.
2. Abnormal distribution of the bone stock.
3. Narrow opening.
4. Excessive anteversion.
Epidemiology, Demographics and Natural History of CHD in Adults

G. Hartofilakidis, Th. Karachalios, K. Stamos

Orthopedics, August 2000
# Congenital Hip Disease

\[ n = 356 \]

<table>
<thead>
<tr>
<th>Type</th>
<th>n. of Hips</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dysplasia</td>
<td>170 (47.7%)</td>
</tr>
<tr>
<td>Low Dislocation</td>
<td>85 (23.9%)</td>
</tr>
<tr>
<td>High Dislocation</td>
<td>101 (28.4%)</td>
</tr>
</tbody>
</table>
At Wrightington Hospital we are using the classification of Hartofilakidis et al because it describes the acetabular pathology more precisely.

P. Bobak, B.M. Wroblewski et al
To define the inherent difficulties in the reconstruction of congenital hip dislocation, we have used the simple and effective classification of Hartofilakidis et al.

W. Harris in the “Adult Hip”, 1998
Total Hip Replacement for the Dislocated Hip

G. Jaroszynski et al.

JBJS Am Feb 2001

The classification that we find most practical is that of Hartofilakidis et al: dysplasia, low dislocation and high dislocation