HIP ARTHRODESIS

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HIP ARTHRODESIS

- Historical review
- Indications
- Techniques
- Results
- Conversion to THR
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Historical review

Lagrange: hip arthrodesis on a 16-year-old girl in 1886

Internal fixation was introduced during the 1930s to 1950s (van Nes, Burns, Watson-Jones, Kuntscher, Charnley)

Schneider’s introduction of the Cobra-head plate in 1966

Murrell and Fitch modified Schneider’s technique to preserve the abductors
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Indications

PAINFUL, DISABLING, END STAGE COXARTHROROSIS

CDH, CP

Sepsis, TB
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Indications

- Post-traumatic
- Perthes, SUFE, AVN, Chondrolysis
- Failed THR
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**Contraindications**

**Absolute contraindications to arthrodesis**

- Degenerative changes with limitation of motion in the ipsilateral knee, lumbar spine, or contralateral hip
- Inflammatory arthritis
- Active infection
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Contraindications

Relative contraindications

- Poor general condition
- Advancing age
- Marked obesity
- Negative psychologic attitude
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Techniques

AIM : STABLE PAINFREE HIP

(a) primary union of the arthrodesis within a reasonable time
(b) avoid postoperative casting
(c) minimize inequality of leg lengths
(d) preserve knee motion
(e) achieve proper position of the fused hip
(f) facilitate potential future conversion to total hip arthroplasty by retaining the hip abductors
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Techniques

The position of fusion recently recommended is

- 20 to 30 degrees of flexion
- neutral abduction–adduction (up to 5 degrees of adduction), and
- neutral internal– external rotation (or slight external rotation)
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Techniques

Three main categories

- Intra-articular
- Extra-articular
- Combination
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Techniques

*Intra-articular*

- Dislocation of the joint
- Removal of all remaining cartilage, sclerotic or necrotic bone
- Fixation
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Techniques

Extra-articular
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Techniques

Combination

Murrell and Fitch modification of Schneider’s Cobra-plate technique
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Techniques

Cobra-plate technique
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Results

Patients typically will have a short leg

will walk with a slower pace

and a limp

Limitation of daily activities that require extremes

of hip flexion that is bending,

sitting,

bicycling, or

donning socks or shoes

May have some difficulty with sexual activities
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Conversion to THR

Indications

- painful nonunion
- pain in the back or adjacent joints
- poor position of the arthrodesis
- patient’s request
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Conversion to THR

- Preoperative evaluation of the abductors’ function
- High complication rate: dislocation, sciatic n. injury, infection
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Conversion to THR

- Transtrochanteric or posterior approach
- In situ neck osteotomy
- Extensive soft tissue release
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Conversion to THR

TECHNICAL DIFFICULTIES

- Neck osteotomy level
- Component orientation
- Soft tissue balance
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Recommended literature


Thank you