


Femoral Neck Fractures: Young Ones that is...

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Disclosures

- Section Editor: Journal of Ortho Trauma
- Consultant: Stryker USA and Europe
- Royalties: Stryker USA and Europe
- Stocks: GLW/Altior Trauma

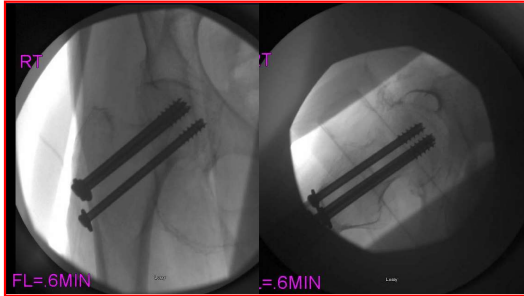
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Valgus Impacted Femoral Neck: Elderly Patient



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Cannulated Screws: 2 or 3



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Displaced Femoral Neck:
Elderly Patient
Marginal Physiology and Mobility



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Hemi-Arthroplasty



Bipolar vs Unipolar

and

Cemented vs Press Fit

?

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**Displaced Femoral Neck:
Elderly Patient
Active and Healthy**



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Total Hip Arthroplasty



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**Femoral Neck Fractures:
Young Healthy Active Patient**

- High Energy
- Shear Fractures
- Avascular Necrosis



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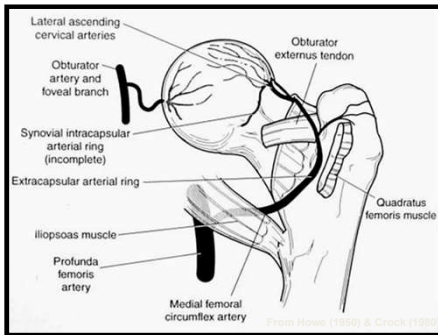
Femoral Neck Fractures: Young Healthy Active Patient

- High Energy
- Shear Fractures
- Avascular Necrosis



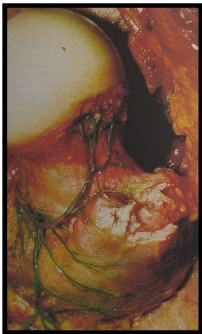
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Vascular Anatomy



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Vascular Anatomy



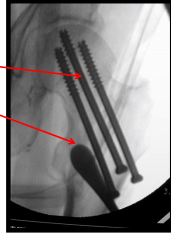
- Proximal Fracture:
 - Vascular disruption
- Distal Fracture
 - Tolerates displacement

Claffey, JBS(B) '60

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Femoral Neck Fracture: Argument for Urgency

- Improve ischemia
 - Arterial: unkink remaining vessels
 - Venous: relieve tamponade
- Duration predicts AVN ??
- Change natural history in <20%?

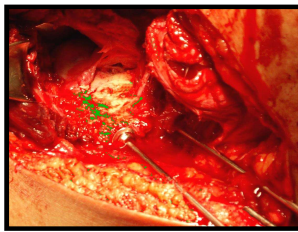


Ly, Swiotkowski ICL 2009

Chrystal et al JOT 2011

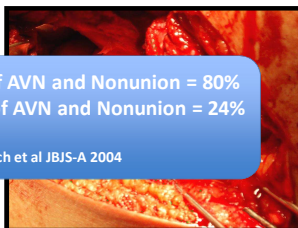
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Displaced Femoral Neck Fractures in Young Patients Require an *Open Reduction*



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Displaced Femoral Neck Fractures in Young Patients Require an *Open Reduction*



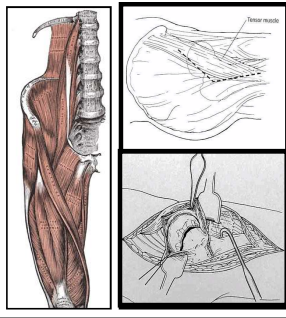
Poor reduction risk of AVN and Nonunion = 80%
Good Reduction risk of AVN and Nonunion = 24%

Haidukewych et al JBJS-A 2004

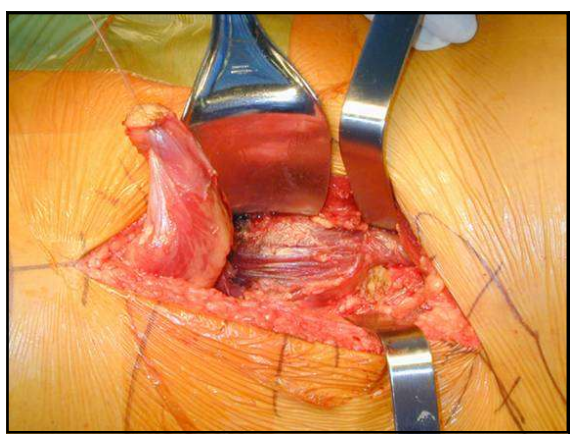
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Open Reduction of Displaced Femoral Neck Fractures

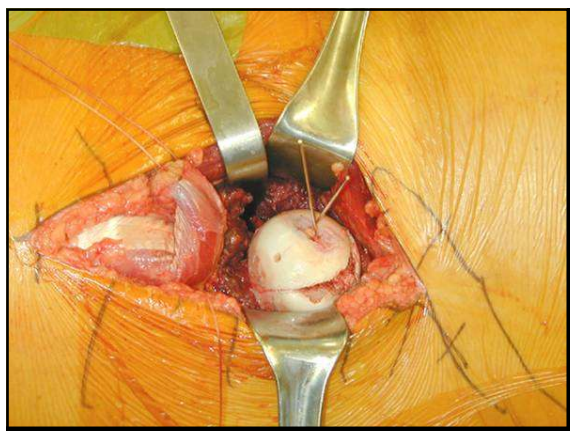
Smith-Peterson



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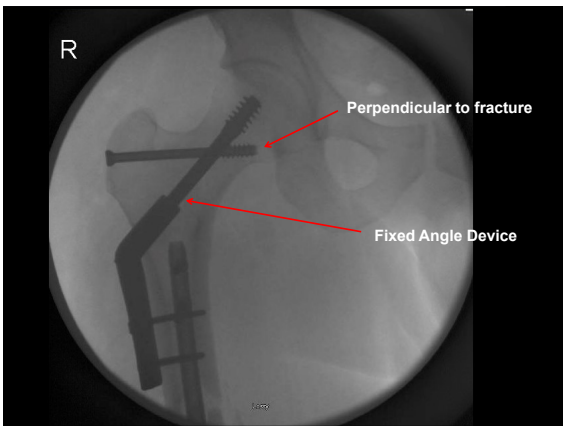
Reduction and Stabilization:



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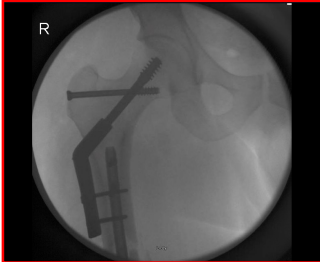


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Vertical Femoral Neck Fracture Fixation



Nonunion:

Cannulated Screws Alone
19%

FAD plus Screw
8%

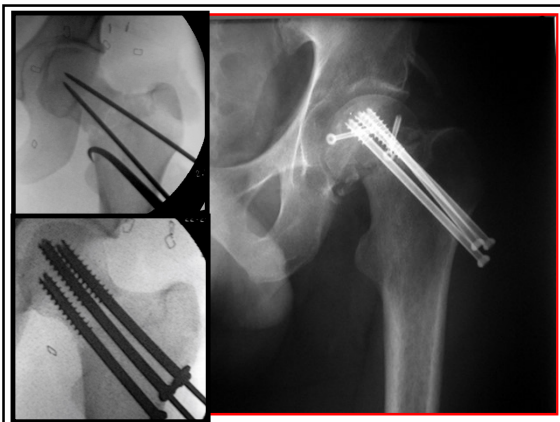
Liporace et al JBJS-A 2008

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22 y.o. MVC



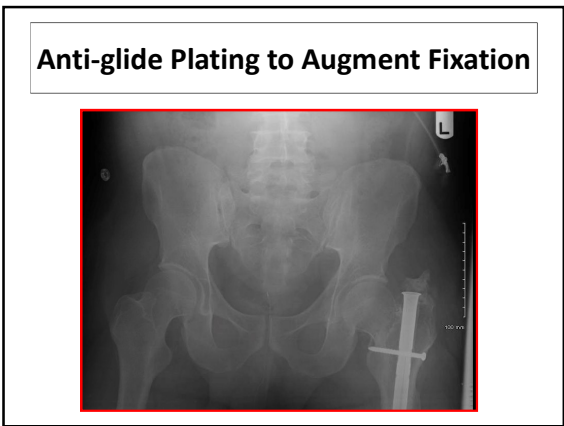
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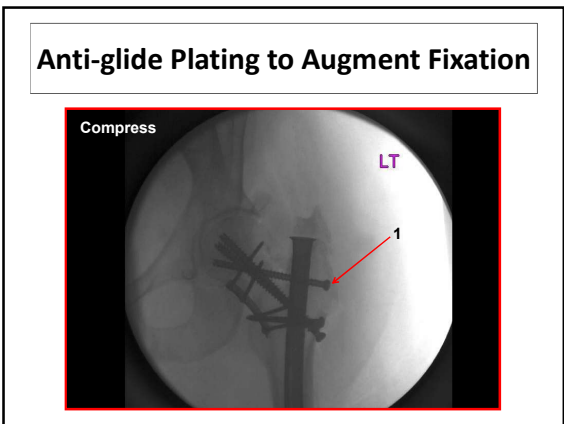
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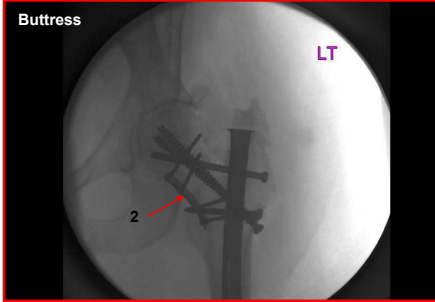


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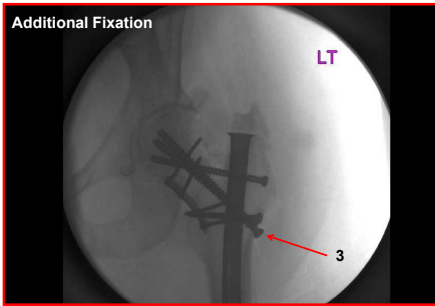
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Anti-glide Plating to Augment Fixation



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Anti-glide Plating to Augment Fixation



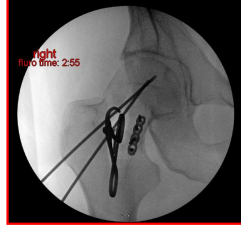
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Anti-glide Plating to Augment Fixation



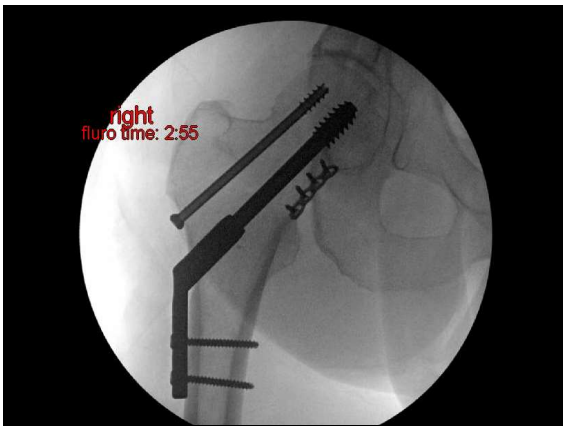
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Anti-glide Plating to Augment Fixation



Can also help to maintain reduction

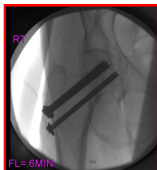
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In Summary...

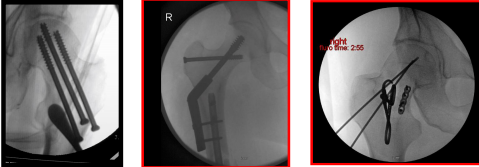
- Elderly Hip Fractures:
 - Valgus Impacted = Cannulated screws
 - Displaced non-active = Hemi-arthroplasty
 - Displaced Active = Total Hip Arthroplasty



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In Summary...

- Young Hip Fractures:
 - Urgent and consider capsulotomy
 - Displaced fractures require OPEN REDUCTION
 - Use fixed angle devices and anti-glide plates



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Thank you.

Questions?

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