THR in “Active TB” of Hip

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THR in “Active” TB Hip (Stage 3 and 4)

- “Active” – Diagnosed but not on ATT / still on ATT
- Previously Considered Contraindication in active stage
- Fear of Reactivation and Failure
- Hardinge’s Recommendation: No draining sinus for at least 20 years / OR / ankylosis for more than 10 years.


Mycobacterium Tuberculosis

- Different from Pyogenic Bacteria
- Rarely adheres to Metal Surface
- Little or no Biofilm formation
- Rifampicin – Intracellular / Can enter Biofilm


How early can one operate?

- Don’t have to wait for complete healing of disease.
- Many articles on THR in “Active stage of Disease”
- Give preoperative chemotherapy (3-4 months)
- Obtain pus samples if possible (MDR)
- Preoperative CT and MRI


Total Hip Arthroplasty in Patients with Active Tuberculosis of the Hip with Advanced Arthritis

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Summary

• 12 Patients
• 25 – 58 Months
• Preop ATT 4-8 weeks
• Postop ATT 12-18 months

• Only 1 recurrence .. patient did not take ATT

• Concluded : THA in active tuberculosis hip has a Low Risk of Reactivation
Total hip arthroplasty for active tuberculosis of the hip

Yongqing Wang · Jingsheng Wang · Zhanmin Xu · Yuan Li · Huimin Wang
Summary

- 6 Patients
- Preop 2 weeks ATT
- Postop 1 year ATT
- FU 34 – 80 months
- All Healed
- No Recurrence
- No Complications

Conclusion: THA in advanced active tuberculosis of the hip is “a safe procedure”
Total hip replacement for patients with active tuberculosis of the hip

A SYSTEMATIC REVIEW AND POOLED ANALYSIS

The timing of total hip replacement (THR) in patients with active tuberculosis (TB) of the hip is controversial, because of the potential risk of reactivation of infection. There is little information about the outcome of THR in these patients. We conducted a systematic review of published studies that evaluated the outcome of THR in patients with active TB of the hip. A review of multiple databases referenced articles published between 1950 and 2012. A total of six articles were identified, comprising 65 patients. TB was confirmed histologically in all patients. The mean follow-up was 53.2 months (24 to 108). Antituberculosis treatment continued post-operatively for between six and 15 months, after debridement and THR. One non-compliant patient had reactivation of infection. At the final follow-up the mean Harris hip score was 91.7 (56 to 98). We conclude that THR in patients with active TB of the hip is a safe procedure, providing symptomatic relief and functional improvement if undertaken in association with extensive debridement and appropriate antituberculosis treatment.

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We conclude that THR in patients with active TB of the hip is a Safe Procedure, providing symptomatic relief and functional improvement if undertaken in association with extensive debridement and appropriate antituberculosis treatment.
How early can one operate?

- Don’t have to wait for complete healing of disease.
- **If draining sinus**: hold on !!!! TWO STAGES
- Give preoperative chemotherapy (2-3 months)
- Assess Local Milieu and General Health
- Obtain pus samples if possible (MDR)
- Preoperative CT and MRI: Bone Stock etc...


Cemented or Uncemented?

- Both work well!!
- No influence on rate of reactivation.
- **Femur**: Bone quality is deciding factor.
- **Acetabulam**: Uncemented preferred by majority of authors. Can do grafting of cavities.


ATT in Cement?

- Little Information
- Isoniazid, Rifampicin and Ethambutol are Heat Stable
- Risk of toxicity and poor elution currently preclude their use.


Examples
Dr S***** D****** 46 Male

- Pulmonologist
- ITP on Steroids
- Left hip pain
- Labelled initially as AVN because of Steroids
- Severe pain with Spasm
- Aspiration Hip : Myco TB on PCR
- Put on ATT and Traction
- Lost to FU
56 Yr Male: Symptoms 3 months: PCR +ve
10 Months of Disease
Key Points: Surgery

- Tissue planes sometimes difficult to delineate.
- More soft tissue bleeding.
- Obtain pus and “tissue” sample for Culture, HPE
- Adequate debrima.
- Careful Dislocation. Always use hook.
- Avoid aggressive curettage of soft bone.
- Careful with Acetabular retractors.
Key Points

• May require releases of contractures (Iliopsoas, adductors etc.)

• Fresh Frozen / Freeze Dried Allografts have good Incorporation rate.

• Postoperative ATT from 6-12 months.
Reactivation of disease after THR

- No Clear guidelines
- Retention + ATT
- Revision
- Resection

6 Months

Drained
Cultured
MDR
II line ATT

9 Months
Allo Graft (Freeze Dried)
Consensus Statement in Literature

THR is a Safe Procedure

“Even in Active TB Hip” and gives satisfactory results.
THANK YOU
For the purpose of Discussion

• Active Stage (Patient on ATT)

• Healed Stage (Clinico - radiologically)