

Egyptian Community Arthroplasty Register

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Acknowledgement

Participating surgeons:

- Maher Fansa, FRCS. Al Helal Orthopaedic Hospital (National Orthopaedic Hospital)
- Ahmed Bahaa El Din Al Ahwal, FRCS. October 6 University Hospital
- Emad Saweeres, FRCS Orth, MD. El sahel teaching Hospital
- Fouad Zamel, FRCS Orth, MD. Cairo University Hospitals
- Ahmed Wagih, MRCS, MD. National Institute for Neuro Motor System
- Ahmed El Morsy, MRCS, MD. October 6 University Hospital

Why a register in Egypt?

- **Who on earth bother?**
 - What are y talking about?
- **But because of factors related to**
 - Patients
 - Implants
 - Hospitals
 - Country
 - Personal

Patients: Are different

- Knee OA > high incidence in Middle East:
 - 60% for age 66 Y
 - Al-Arfaj, SMJ. 2003:291-293
- Different pathology: Varus
- Demands: Squatting, <walk
- Different circumstances (economy, psychology)
- Different solution:
 - Osteotomy?
 - Bilateral simultaneous?



Implants

- Medical device alert: X
 - A hip resurfacing implant recall arrived late
- Unknown and low cost implants
- No stock in hospitals: A company Rep (per case)
- Quality of known implants: Shelf life, sizes, etc
- Economic limitations: Reduced cost
 - Offset towards bad cement

Which implant????



Hospitals

- Dedicated arthroplasty theatre (OR): X
- Laminar flow: X
- Space gown: X
- Antibiotics: Excessive
- Health care systems: Efficiency?

Country and region

- No published study or official documentation of outcome of arthroplasty procedures in the Arab countries
 - Egypt: > 80 millions Arab countries: > 350 millions
- Rough estimate:
 - Rate of TKA is less than 10% of what should be done
 - 1 million patients (accumulative) require TKA in Egypt alone
- Unanswered questions:
 - Hip OA is rare but THA is as common as TKA

Personal reasons

- A study of 400 TKA in 1994 at W Sussex
 - Comparing PROMS to clinical follow up
 - Results: Surgeons high-rated the success of TKA
 - JBJS-Br Supp 2004
- I used British & Canadian registry during my training
- I believe in “Arthroplasty Register”

Materials and methods

- The register started by one surgeon (MAH): 2007
- Then joined by 6 surgeons in 6 different hospitals
- The registry proforma designed in 3 pages; pre-, intra- and post-operative (clinical follow up not PROMS)
- This initial analysis of 503 cases

Pre- and intra-operative form

Registered New Hip Arthroplasty Operative		Operative Details (TKA)	
<p>Public/Share Data:</p> <p>Website: <input type="text"/> My Account Change Password Edit My Profile Logout</p> <p>Username: <input type="text"/> Password: <input type="password"/></p> <p>Role: <input type="radio"/> Admin <input type="radio"/> Nurse <input type="radio"/> Patient</p> <p>Side: <input type="radio"/> Left <input type="radio"/> Right <input type="radio"/> Bilateral</p> <p>Company: <input type="radio"/> Pain <input type="radio"/> Office <input type="radio"/> Fracture <input type="radio"/> Chronic <input type="radio"/> Osteomyel <input type="radio"/> Smoking <input type="radio"/> Inactivity</p> <p>Specialty: <input type="text"/></p> <p>History (Medical Assistant)</p>		<p>Name: <input type="text"/> Patient ID: <input type="text"/></p> <p>Hospital: <input type="text"/> Operation date: <input type="text"/> Time: <input type="text"/> to <input type="text"/> (total: <input type="text"/> min)</p> <p>Anesthetic types: <input type="checkbox"/> General <input type="checkbox"/> Regional-Epidural <input type="checkbox"/> Spinal</p> <p>Patient physical status (ASA grade): <input type="checkbox"/> P1 <input type="checkbox"/> P2 <input type="checkbox"/> P3 <input type="checkbox"/> P4 <input type="checkbox"/> P5 BMI: <input type="text"/></p> <p>Operation funding: <input type="checkbox"/> Multi funding (array) <input type="checkbox"/> Hospital Case <input type="checkbox"/> Private</p> <p>Referral: <input type="checkbox"/> No <input type="checkbox"/> Yes (<input type="text"/>) Lumbar Bow threat: <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Surgeon: <input type="text"/> Assistant: <input type="text"/></p> <p>Anesthetist: <input type="text"/> Scrub Nurse: <input type="text"/></p> <p>Side: <input type="checkbox"/> Left <input type="checkbox"/> Right <input type="checkbox"/> Bilateral <input type="checkbox"/> Contra-lateral TKA</p> <p>Procedure: <input type="checkbox"/> Primary <input type="checkbox"/> Complex primary</p> <p>Previous operation on the knee:</p> <p>Default Technique: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Tourniquet <input type="checkbox"/> No <input type="checkbox"/> Yes (time: <input type="text"/>)</p> <p>Approach: <input type="checkbox"/> Lateral parapatellar <input type="checkbox"/> Medial Parapatellar <input type="checkbox"/> Sub-Vastus <input type="checkbox"/> Other (<input type="text"/>)</p> <p>Minimally invasive: <input type="checkbox"/> No <input type="checkbox"/> Yes CAS: <input type="checkbox"/> No <input type="checkbox"/> Yes</p> <p>Bone defects: <input type="checkbox"/> No <input type="checkbox"/> Femur <input type="checkbox"/> Tibia <input type="checkbox"/> Patella</p> <p>Bone grafts: <input type="checkbox"/> No <input type="checkbox"/> Femoral <input type="checkbox"/> Tibial <input type="checkbox"/> Patella</p> <p>Cemented technique: <input type="checkbox"/> Femur <input type="checkbox"/> Tibia <input type="checkbox"/> Patella</p> <p>Patellar Tracking: <input type="checkbox"/> Poor <input type="checkbox"/> Satisfactory <input type="checkbox"/> Good</p> <p>ROM: <input type="checkbox"/> (E) (R) (B) (K) (M) (S) <input type="checkbox"/> Bilateral <input type="checkbox"/> R > L <input type="checkbox"/> L > R</p> <p>Soft Tissue Balance: <input type="checkbox"/> Medial <input type="checkbox"/> Lateral <input type="checkbox"/> Imbalanced (c/r flexion [M L] c/r extension [M L])</p> <p>Intraoperative Complications: <input type="checkbox"/> No <input type="checkbox"/> Yes (Specify: <input type="text"/>)</p> <p>Implant:</p> <ul style="list-style-type: none"> Make: <input type="text"/> Type: <input type="checkbox"/> CR <input type="checkbox"/> PS <input type="checkbox"/> Fixed bearing <input type="checkbox"/> Mobile bearing Size: Femoral (<input type="text"/>) Tibial Tray (<input type="text"/>) Tibial insert (<input type="text"/>) Patella (<input type="text"/>) Cement: <input type="checkbox"/> Make: <input type="text"/> <input type="checkbox"/> Low <input type="checkbox"/> High <input type="checkbox"/> Antibiotic 	
<p>Lig length discrepancy: <input type="checkbox"/> Apparent (<input type="text"/> cm) <input type="checkbox"/> True (<input type="text"/> cm) <input type="checkbox"/> Above the trochanter <input type="checkbox"/> Below the trochanter</p> <p>Trendelenburg test: <input type="checkbox"/> Distal Pelvis: <input type="text"/></p> <p>Spine & Knee Examination:</p>			
<p>Investigations Results</p> <p>Hemoglobin:</p> <p>X-rays: <input type="checkbox"/> Osteoporosis <input type="checkbox"/> Dysplasia <input type="checkbox"/> Narrowing femoral canal <input type="checkbox"/> Bone defect (Acetabular / Femoral) <input type="checkbox"/> Massive Osteophytes</p> <p>Deformity (<input type="text"/>)</p> <p>Pathology:</p> <p><input type="checkbox"/> Osteomyelitis <input type="checkbox"/> AVN <input type="checkbox"/> Post-traumatic <input type="checkbox"/> Previous infection <input type="checkbox"/> Previous arthrodesis</p> <p>Inflammatory arthropathy (RA) <input type="checkbox"/> AS <input type="checkbox"/> Seronegative <input type="checkbox"/> Psoriatic</p> <p>Pediatric Hip disease (DDH) <input type="checkbox"/> Perthes disease <input type="checkbox"/> SLFE <input type="checkbox"/> Other (specify: <input type="text"/>)</p> <p>Remarks: <input type="text"/></p>			

Procedures

- Primary TKA
 - Uni-compartmental
 - Revision TKA
 - Navigational TKA
 - Custom made TKA (PSI)
 - Shoulder arthroplasty
- Primary THA
 - Resurfacing hip arthroplasty
 - Revision THA
 - Cemented, hybrid, uncemented
 - Bearing surfaces (poly, metal & Ceramic)

Data collection: Implant data

- **Sticky labels:**
All components including cement & screws
- **Implant companies: 8**
J & J, Zimmer, Stryker, Corin, Samo, Implant Cast, Implant Int, Hippocrat



Results THA

Mean age was 51 years (19-86)
Female to male ratio was 1.15: 1

Uncemented THA 84.8 %

Cemented 10.2

Hybrid THA .5%

Primary THA 49 %

Complex primary 30 %

Revision 21%

Results: TKA

- A female to male ratio was 3.14: 1
- The main indication was OA in 73 %
- **Severe varus in 47%**
 - Significant bone defect in 15%
- 68.06% primary
- **25.13% complex primary**
- 6.81% revision arthroplasty

Limitations

- Small number
- Initial analysis predominantly related to one surgeon (MAH), not representative of the region
- No PROMS
- Some missing data
- Statistics: No survival analysis yet

Conclusion

- **However,**
- Some results are not surgeon dependent:
 - Patients' age for THA,
 - Indications for THA (ped. hip diseases, failed ORIF of # NoF, AVN and trauma rather than OA)
 - The high % of complex THA & TKA due to late presentation and complex pathology
- Results related to implants.....

Conclusion

- Establishing such a register is very difficult due to
 - Lack of funding
 - Low interest in research
 - Private practice
- We reached a stage to handle the registry to a higher authority
 - Egyptian Orthopaedic association or
 - Ministry of Health

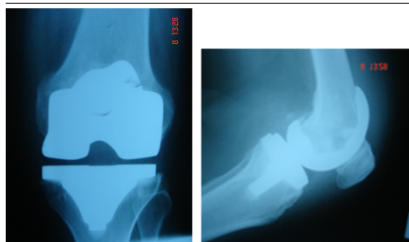
Is the registry an AUDIT or just a research project

- Blood transfusion reduced to 5 % in unilateral knee
- More bilateral TKR and shorter hospital stay
- Implant selection:
 - Low cost implant for less active patients
 - Be careful about cement
- Reassurance about lack of laminar flow, space gowns and dedicated OR
 - Infection rate is less than 2 %
- Knee & hip class: Misconception, expectations, fear

Arthroplasty Card

Scorpio Stryker – PS - Fixed
Size: Femur (7) Tibia (5) Poly (10)
Cement: Stryker low molecular weight with antibiotic

5 Month follow up: No complications
 Knee society score: 90



Arthroplasty Register

██████████ Female
 Dob: 1/7/1953
 Diabetic

Sever OA both Knees
 Bilateral Simultaneous TKA **L**
 Technique: Coventional
 Date of surgery: 5/8/2007

Zayed Specialized Hospital- Cairo.
 Combined epidural
 Surgeon: Mahmoud Hafez

Future

- Premature baby
 - May survive with support or may vanish
- Operation walk-Egypt
 - A fund from a local Charity to perform 1000 TKA free for needy patients from deprived and poor areas in Egypt
 - Outcome results should be published
 - All will be included in the register
- Electronic data collection

Electronic format

www.egyorth.org

Arthroplasty Register

Login

Email:

Password:

[Forget Password](#)

New Account

Name:

Title:

Specialist:

Email:

Password:

Country:

City:

Hospital:

No conflict of interest

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Presentations & publications:

Conferences: EFORT, ISTA, SICOT and ISAR

- 2010: **Egyptian Arthroplasty register: Is it possible?** In the 3rd International Arthroplasty Conference, Sharm El Sheikh, Egypt
- 2011: **A Community Arthroplasty register in Middle East based on individual initiative** . In the 12 EFORT Conference, Copenhagen, Denmark
- 2012: **Egyptian Arthroplasty Register**. In The SICOT, Dubai, UAE & **A community arthroplasty register**. In ISTA 2012, Sydney, Australia
- 2013: **Egyptian community arthroplasty register**. In ISAR, Stratford upon Avon, UK

Journals: KSSTA, JBE & AO

- The use of CAOS in complex cases of hip and knee arthroplasty: experience from a developing country. The Journal of Biomedical Eng. 2012:301-306
- PSI for Bilateral TKA with severe articular deformities. KSSTA. Due 2013
- The application of surgical RP in a developing country. Advances in Orth. Due 2013