RITORNO ALL’ATTIVITA’ SPORTIVA DOPO INTERVENTO DI PROTESI GINOCCHIO - IL PARERE DEL CHIRURGO

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INTRODUCTION

Osteoarthritis (OA) of the knee is the most important cause of pain in middle-aged and older individuals, and the incidence is increasing.

Structural associated changes include cartilage loss, meniscal damage, marrow lesions and synovitis.


The rise in life expectancy and obesity has led to an improved prevalence of OA.
Physical activity

There is strong evidence that physical activity reduces the risk of cardiovascular disease, sarcopenia and neuropsychological disorders (Montero-Fernandez and Serra-Rexach, 2013; Soares-Miranda et al, 2014)

In elderly patients, fear of injury and pain lead to avoidance of physical activity → This concept must be considered when planning replacing surgery and postoperative rehabilitation

ARTROPLASTY

TKA is a successful strategy against severe OA → it reduces pain, improves quality of life and is cost-effective

However, long-term functional results and activity limitations due to the pre-surgery chronic joint disease do not spontaneously resolve → It is fundamental a correct peri and postoperative management


→ People commonly think that arthroplasty can not be correlated with acceptable physical performances
The outcomes of TKA may be assessed with four main methods:

- **IMPLANT SURVIVORSHIP**
- **IMAGE-BASED ASSESSMENT**
- **CLINICAL ASSESSMENT**
- **PATIENT-REPORTED OUTCOME MEASURES (PROMs)**

The first three methods are objective, while the fourth depends on patient’s perceptions.

→ **It is important not to underestimate this point**

Total knee arthroplasty (TKA) has been widely proven for the treatment of advanced OA of the knee.

Unicompartmental knee arthroplasty (UKA) is effective when either the lateral or the medial side of the knee is more affected by OA.

UKA guarantees a greater return to sport than TKA.


→ Nevertheless it is important to remember that indications to UKA or TKA are different and prosthesis survivorship has been demonstrated to be higher in TKA (Lyons MC et al. 2012, Niinemäki T et al. 2014, Lim JW et al. 2014).
Total knee arthroplasty (TKA) is effective in decreasing pain and increasing functional performance, but less is known about the influence of TKA on restoring physical activity levels.


Physical activity is «any bodily movement produced by skeletal muscle that results in energy expenditure»

PERIOPERATIVE MANAGEMENT

• A multidisciplinary approach provides satisfactory post-operative analgesia allowing early safe ambulation and expedited discharge to home

Some authors assess that exercise programs during the first two months after surgery give only modest benefits.

This may be explained as most of those programs focus on improving simple knee movement and independent mobility during that period.


This lack of benefits may be solved with a more active and earlier mobilization, and the surgeon is the first professional figure who must set this concept up.
SPORTS AFTER TKA

→ PERIOPERATORY ACTIONS:
- TISSUE SPARING TECHNIQUE
- BLOOD LOSS REDUCTION WITH TRANEXAMIC ACID
- INTRA-ARTICULAR ANALGESIA. NO OPIOID DRUGS
- ENHANCED RECOVERY PROGRAMMES

→ IMPROVED QUALITY OF LIFE
AAOS 2014

• Walk as much as you would like, but walking is no substitute for the exercises.
• Swimming excellent low-impact activity after a total knee replacement.
• Lower impact fitness activities such as golfing, bicycling, and light tennis increase the longevity of your knee and are preferable over high-impact activities such as jogging, racquetball and skiing.
MATERIAL

- TKA 2005-2012: 506 patients (577 surgeries) of which
  - Patients practicing sport activity post TKA: 60 (66 surgeries) 10%
  - Males: 30 Females: 30 Right: 29 Left: 37 Bilat: 6
  - Mean age: 68 years (r. 38-81)
Sport activity pre:

- Ski: 9
- Swimming: 8
- Dance: 10
- Football: 1
- Gym: 9
- Cyclism: 7
- Tennis: 3
- Others: 4
Sport activity post:

- Ski: 8
- Swimming: 16
- Dance: 13
- Football: 1
- Gym: 21
- Cyclism: 14
- Tennis: 4
- Others: 6
METHODS

- All subjects were operated on by the same surgeon.
- SUBVASTUS or TRANSTENDINOUS APPROACH
- METAL-BACKED / ALL-POLY tibial implants
- CEMENTED / UNCEMENTED
OUR EXPERIENCE

METHODS
PATELLA NEVER REPLACED
POSTOP

• IMMEDIATE MOBILIZATION AFTER SURGERY

B.E., 80 years old in 2004
RIGHT TKR
SAME DAY OF SURGERY
POSTOP

- IMMEDIATE MOBILIZATION AFTER SURGERY

I.E., 69 years old in 2015
RIGHT TKR
24 h AFTER SURGERY
• IMMEDIATE MOBILIZATION AFTER SURGERY

S.R., 80 years old in 2004
RIGHT TKR
24 h AFTER SURGERY

T.D., 48 years old in 2002
LEFT TKR
24 h AFTER SURGERY
T.D.
In 2002 LEFT TKA (48 y)
In 2003 RIGHT TKA (49 y)
OUR EXPERIENCE

METHODS

• EARLY RECOVERY OF DAILY ACTIVITIES, WITH CONSTANT ATTENTION TO PAIN

F.L., 58 years old in 2004
RIGHT TKR
5 DAYS AFTER SURGERY
THE LESS FUNCTION YOU LOOSE, THE LESS REHABILITATION YOU’LL NEED!
EVALUATION

• TEGNER ACTIVITY LEVEL SCALE (SPORTS ACTIVITY: TEGNER ≥ 5)

• KOOS SCORE
RESULTS

Mean KOOS score:
Preop 41.5 (SD 19.7) postop 89.8 (SD 14)

Mean Tegner:
Preop 4.6 (SD 1.6) Postop 5.3 (SD 0.6)

Mean Follow up 3 ys (r. 1-9)
Tegner activity level scale

- **PRE TKA**: 4.6
- **POST TKA**: 5.3
RETURN TO SPORT

• 17 PATIENTS STARTED PRACTICING SPORTS AFTER TKA 17/60 (28%)

• PATIENTS PRACTISING SPORTS ACTIVITY PRE TKA: 43/60 (72%)

CONTROLATERAL KNEE ARTHRITIS MAY IMPAIR GLOBAL FUNCTION
Fell runner.
Left knee arthritis after femural fracture 1975
CR TKR 2008 58 y
3 y later

GRAZIE
INFINITE
ch’è cuore:

V f 30 in Matica
per h 50 chieh.
V oso D’Fuga’ Benev
(akt 2h 20)
Val de KIÉMES
(1A 0) MAGAIO 2011.
PHYSICAL ACTIVITY AND TKR

• The process of osteointegration seems to progress positively in the presence of early, though protected, mechanical solicitations in elderly patients.

• PSYCOLOGICAL ASPECTS

It is fundamental an early mobilization of the patient who has undergone knee replacement surgery immediately after surgery, in order to favour rapid autonomy.
CR TKR in 2009
(63 y) NOW 69
• ski
• trekking
• alpine climbing
grade V
KOOS 100

34 EXCURSIONS IN 2015!
M.S. in 2001 (74 y)
1 year after LEFT TKA
ALPINE TREKKER
M.S.
LEFT TKA in 2000 (73 y)
RIGHT TKA in 2014 (87 y)
M.S. in 2015 (88 y)
after BILATERAL TKA
A.M.

LEFT TKA in 2015 (72 y)
15 DAYS AFTER SURGERY
IT IS ONLY ARTHROPLASTY!
THE KNEE IS STILL THERE!

ATHENS PARALYMPIC GAMES
CONCLUSIONS

• TKR IS A SOLUTION, NOT A MENACE, WHEN THE QUALITY OF LIFE IS SEVERELY COMPROMISED

• EARLY ACTIVE MOBILIZATION OF THE KNEE PROMOTES FASTER AND EASIER FUNCTIONAL RECOVERY

• LOW IMPACT SPORTS ACTIVITIES CAN BE SAFELY ENCOURAGED

• AN EXCELLENT QUALITY OF LIFE CAN BE REGAINED
27-28 NOVEMBRE 2015
TORINO
8th EFOST CONGRESS 2015

TORINO INTERNATIONAL CONGRESS ON SPORTS TRAUMATOLOGY

8 CREDITI ECM
20 CREDITI ECM CORSO FAD: “MANAGEMENT DELLE LESIONI SPORTIVE”

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POLITECNICO DI TORINO
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 TORINO

PROGRAMMA SCIENTIFICO

Topics
- LCA: anatomia, biomeccanica, indicazioni chirurgiche
- Lesioni legamentose multiple del ginocchio
- LCA: lesioni associate e revisioni
- Infiltrazioni in traumatologia del femur nel 2015
- Ricostruzione del LCA all’interno
- Ritorno allo sport dopo la ricostruzione del LCA
- Spalla e gomito nello sport
- Nutrizione, esecuzione lega e sport
- Trattamento delle lesioni tibiali nel 2015
- Arco a sport
- Acido ialuronico e PRP nel 2015
- Carligna nel 2015
- Protasi al ginocchio e sport
- Caviglia
- Prevenzione delle lesioni da sovaccarico nello sport
- Disabilità e sport
- Stato dell’arte nella traumatologia scheletrica sportiva
- Come valutare le lesioni di ginocchio
- Tecnologia e ingegneria nello sport
- Riabilitazione dei traumi sportivi
- Management delle lesioni n all’atleta top level
- Traumatologia sportiva dal polo
- Diagnostica per immagini dei traumi sportivi

SESSIONI SPECIALI - WORKSHOPS - LETTURE - TAVOLE ROTONDE - FREE PAPERS

BENVENUTI A TORINO

UN TERRITORIO, INFINITE EMozIONI
La prima Capitale dell'Italia ti invita a scoprire la sua storia antica e moderna, i palazzi e i musei, i parchi e i vii alberati, il fiume e le alture, i ristorantii e i castelli storici, le lunghe vie porticate e i quartieri multiethnic, i grandi eventi e i tanti piccoli esercizii che da sempre la rendono unica, in equilibrio tra la rionale