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Return to Sports and Physical Activities After First Metatarsophalangeal Joint Arthrodesis in Young Patients

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Arthrodèse de la MP-1

- Blocage de l'articulation MP-1
- Arthrose sévère – Hallux Rigidus
- Résection cartilage résiduel
- Positionnement
- Compression
- Stabilisation



Arthrose MP-1

- mean age at onset of approximately 50 years,9-11,24
- it is also a relatively common condition in younger patients,
- with one study reporting a mean age of onset at 43 years

Retour au sport

outcomes in specific sports and physical activities remain unclear. The aim of this study was to assess sports and physical activities in young patients following first MTP joint arthrodesis and to compare these results with clinical outcomes.



Matériel et méthode

- Dossiers médicaux de 8 foot and ankle fellowship-trained orthopedic surgeons.
- A search of the registry was performed using the
- Current Procedural Terminology (CPT) code for arthrodesis
- of the hallux MTP joint (28750) among patients who received
- surgery between October 2006 and December 2014,

Matériel et méthode

- Inclusion criteria were
 - first MTP joint arthrodesis, age
 - between 18 and 55 years at time of surgery, and a minimum
 - 2-year follow-up.
- Exclusion criteria included concomitant
 - metatarsal osteotomies, midfoot or hindfoot fusions
 - inflammatory, systemic, or other musculoskeletal disease (that would otherwise impact physical activity)
 - patients with malunion or nonunion after first MTP arthrodesis at follow-up.
- 50/73 éligibles taux de réponse de

Matériel et méthode

- Questionnaire SQ
- Renseigne sur la participation à 14 sports/activités physiques courantes
- Mélange d'activités à
 - forte charge 
 - faible charge 
- Comparaison pré/post opératoire
- Les patients peuvent ajouter jusqu'à 3 de leurs plus importantes activités physiques, y.c. hors liste.
- On ne relève pas le niveau préopératoire de participation aux sports (biais de souvenir)
- On relève la difficulté pré/post opératoire des participants à effectuer leur activités physiques
- 11,12

MacMahon et al

Table 1. Sports and Physical Activities Provided on Sports Questionnaire.

Sport	Impact
Basketball	High
Bicycling	Low
Dancing/Aerobics	High
Football	High
Golf	Low
Hockey	High
Lacrosse	High
Running	High
Soccer	High
Squash	High
Swimming	Low
Tennis	High
Walking	Low
Weight lifting	High

Résultats

Table 1. Preoperative and Postoperative Sports and Physical Activities^a.

Impact	Sport	Preop. No. of Participants (%)	Postop. No. of Participants (%)	Preop. to Postop. Change
Low	Walking ^b	41 (82)	46 (92)	+5
Low	Biking ^b	25 (50)	29 (58)	+4
Low	Swimming ^b	19 (38)	22 (44)	+3
High	Weightlifting ^b	19 (38)	20 (40)	+1
High	Running ^b	12 (24)	12 (24)	0
Low	Golf ^b	12 (24)	12 (24)	0
High	Dancing/Aerobics ^b	9 (18)	11 (22)	+2
High	Tennis ^b	9 (18)	10 (20)	+1
High	Basketball ^b	5 (10)	6 (12)	+1
High	Football ^b	1 (2)	3 (6)	+2
High	Soccer ^b	2 (2)	3 (6)	+1
Low	Skiing	3 (3)	3 (6)	0
Low	Yoga	3 (3)	3 (6)	0
Low	Elliptical	2 (2)	2 (2)	0
High	Squash ^b	1 (2)	1 (2)	0
Low	Rowing	1 (2)	1 (2)	0
Low	Horseback riding	1 (2)	1 (2)	0
Low	Pilates	1 (2)	1 (2)	0
Low	Hiking	1 (2)	1 (2)	0
Low	Ice skating	1 (2)	1 (2)	0
Low	Cross-country skiing	1 (2)	1 (2)	0
Total	21	169	189	+20

Abbreviations: preop. = preoperative; postop. = postoperative.

^aPatients could indicate participation in multiple sports and physical activities.

^bSports and physical activities provided on Sports Questionnaire.

- 21 Sports
- Augmentation de l'activité physique
- Augmentation du taux d'activités à forte charge (34.3% → 34.9%)
- Max participation
- Aucun arrêt du sport
- 21 nouvelles activités

Résultats

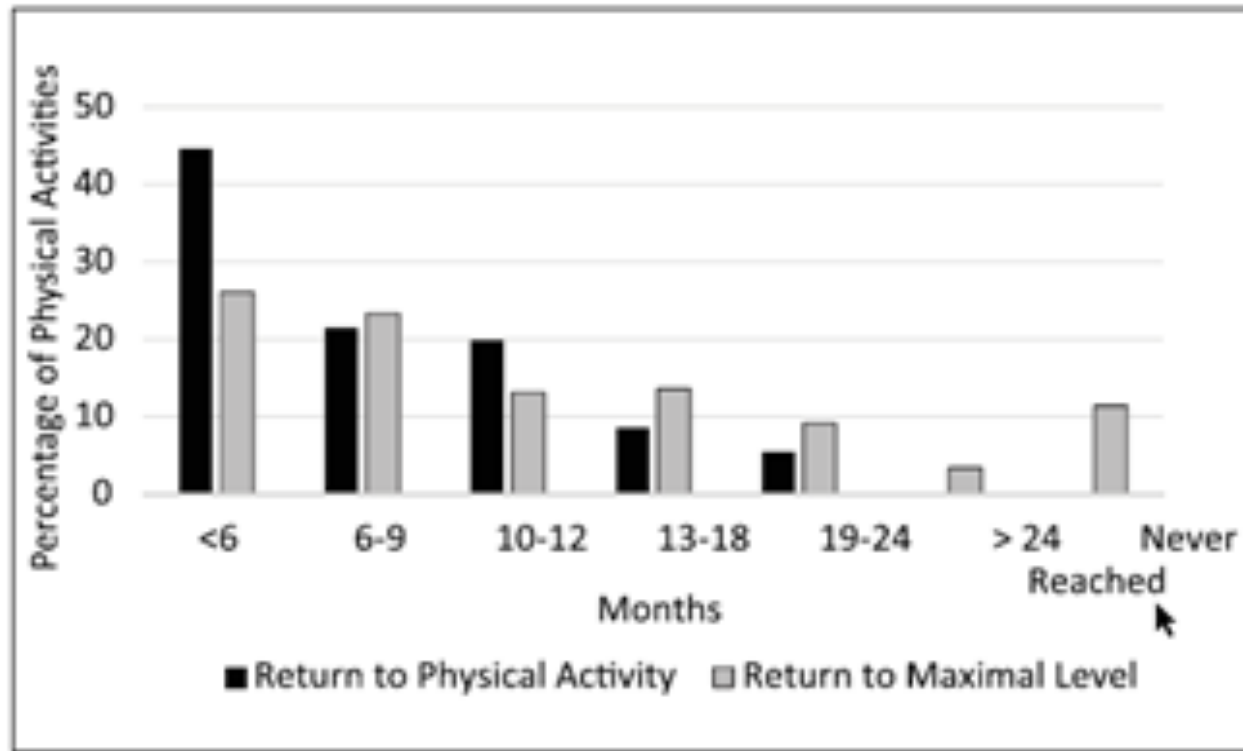


Figure 1. Time to return to physical activities and maximal participation level.

Maximal participation levels in 88.6% of physical activities

The median time to return to physical activity was 6 to 9 (range, <6 to 24) months

Résultats

Table 3. Changes in Physical Activity Difficulty.

Sport	Less Difficult (%)	Same (%)	More Difficult (%)	Total
Walking	20 (45)	11 (25)	13 (30)	44
Biking	4 (14)	19 (66)	6 (21)	29
Swimming	0 (0)	22 (100)	0 (0)	22
Weightlifting	4 (20)	12 (60)	4 (20)	20
Golf	4 (36)	4 (36)	3 (27)	11
Running	6 (55)	4 (36)	1 (9)	11
Basketball	1 (17)	4 (67)	1 (17)	6
Dancing/aerobics	1 (20)	3 (60)	1 (20)	5
Tennis	2 (50)	2 (50)	0 (0)	4
Soccer	2 (67)	1 (33)	0 (0)	3
Yoga	1 (33)	1 (33)	1 (33)	3
Football	1 (50)	1 (50)	0 (0)	2
Elliptical	0 (0)	0 (0)	2 (100)	2
Rowing	0 (0)	1 (100)	0 (0)	1
Horseback riding	0 (0)	1 (100)	0 (0)	1
Pilates	0 (0)	0 (0)	1 (100)	1
Hiking	0 (0)	0 (0)	1 (100)	1
Ice skating	0 (0)	0 (0)	1 (100)	1
Cross country skiing	0 (0)	0 (0)	1 (100)	1
Total physical activities	46	86	36	168
% of physical activities	27.4	51.2	21.4	100

Difficulté :
égale ou moindre

Résultats

Table 4. Reasons for Increased Physical Activity Difficulty.^a

Reason for Increased Difficulty	No. of Patients	% of Cohort
Stiffness	8	16
Pain	8	16
Change in gait or balance	8	16
Swelling	2	4
Difficulty with footwear	2	4
Lack of confidence	2	4
Uncomfortable hardware	1	2
Weakness	1	2
Out of shape	1	2

^aA total of 16 patients (32% of the cohort of 50) provided reasons for increased physical activity difficulty.

Raisons de l'augmentation des difficultés
(données par 16/50 patients)

Résultats

Table 2. Postoperative Physical Activity Grades.

Grade	Hours of Exercise/Week	No. of Patients	% of Study Cohort (n = 50)
0 (sedentary)	0	1	2
1 (moderately active)	>0 and \leq 5	21	42
2 (highly active)	>5 and \leq 10	12	24
3 (extremely active)	>10	16	32

Résultats

- Amélioration significative de tous les sous-scores FAOS
 - Douleur
 - Symptômes
 - AVQ
 - Sports et loisirs
 - Qualité de vie
- Pas d'association FAOS/ fréquence des activités sportives
- Association significative symptômes/durée de marche ou de course
- Pas d'association FAOS/ durée vélo, nage ou fitness
- Pas d'association FAOS/ modification de difficulté
- Association sous-score douleur avec la satisfaction

Points forts

- Investigation du retour au sport dans une cohorte jeune
- Tendance à l'amélioration
- Questionnaire spécifique sur le retour au sport
- Peut améliorer le conseil donné au patient /recadrer les attentes du patient
- Corrobore les résultats d'études pedobarographiques (DeFrino

Points faibles

- Pas de prise en compte des échecs
- Aucune mesure objective (RX, clinique, performance)
- Aucune distinction des techniques opératoires/suivi
- Questionnaire spécifique sur le retour au sport administré rétrospectivement

