XXVI CONGRESSO NAZIONALE SITOP

10, 11, 12 OTTOBRE 2024

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VITE ENDOSENOTARSICA

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SITOP
Società Italiana di Ortopedia e Traumatologia Pediatrica

Journal of *Clinical Medicine*

MDPI

Article

Short-Term and Medium-Term Radiological and Clinical Assessment of Patients with Symptomatic Flexible Flatfoot Following Subtalar Arthroereisis with Spherus Screw

Andrzej Bobiński [1], Łukasz Tomczyk [2], Paweł Reichert [3] and Piotr M...

HyProCure for Pediatric Flexible Flatfoot: What Affects the Outcome

Cheng Chen†, JianTao Jiang†, ShaoLing Fu, Cheng Wang, Yan Su, GuoHua Mei, JianFeng Xue, Jian Zou, XueQian Li* and ZhongMin Shi*

Original Article

Satisfactory outcomes of post-operative subtalar extra-articular arthroereisis in juvenile flexible flat foot

Abdulmonem M. Alsiddiky, MD, SSCO, Abdulaziz A. Alsubaie, MBBS, Abdulaziz O. Almuhanna, Medical student, Nawaf M. Alsubaie, Medical student, Faisal A. Alsaleh, Medical student, Hassan M. Alhazzani, Medical student, Bader H. Alruwaily, Medical student, Mohammad S. Alzahrani, Medical student, Khalid A. Bakarman, MBBS, SBIO, Naief S. Alghnimei, MBBS.

Sterut et al. BMC Musculoskeletal Disorders https://doi.org/10.1186/s12891-023-06937-2 (2023) 24:825

RESEARCH

An evaluation of subtalar titanium screw arthroereisis for the treatment of symptomatic paediatric flatfeet - early results

Anna Szesz†, Krzysztof Małecki†, Marcin Sibiński* and Krystyn R. Niedzielski†

Open Access

BMC Musculoskeletal Disorders

Contents lists available at ScienceDirect

The Journal of Foot & Ankle Surgery

journal homepage: www.jfas.org

Original Research

Flexible Juvenile Flat Foot Surgical Correction: A Comparison Between Two Techniques After Ten Years' Experience

Antonio Memeo, MD, Fabio Verdoni, MD, Laura Rossi, MD, Elisa Ferrari, MD, Elena Panuccio, MD, Leopoldo Pedretti, MD

J Child Orthop (2014) 8:479–487
DOI 10.1007/s11832-014-0619-7

ORIGINAL CLINICAL ARTICLE

Subtalar extra-articular screw arthroereisis (SESA) for the treatment of flexible flatfoot in children

Maurizio De Pellegrin · Désirée Moharamzadeh · Walter Michael Strobl · Rainer Biedermann · Christian Tschauner · Thomas Wirth

Longo et al. BMC Pediatrics (2022) 22:83
https://doi.org/10.1186/s12887-022-03145-0

BMC Pediatrics

RESEARCH ARTICLE Open Access

Trends in hospitalization for paediatric flatfoot: an Italian nationwide study from 2001 to 2016

Umile Giuseppe Longo[1,2,3*], Rocco Papalia[1,2,3], Sergio De Salvatore[1,2,3], Laura Ruzzini[4], Vincenzo Candela[1,2,3], Ilaria Piergentili[1,2,3], Leonardo Oggiano[4], Pier Francesco Costici[4] and Vincenzo Denaro[1,2,3]

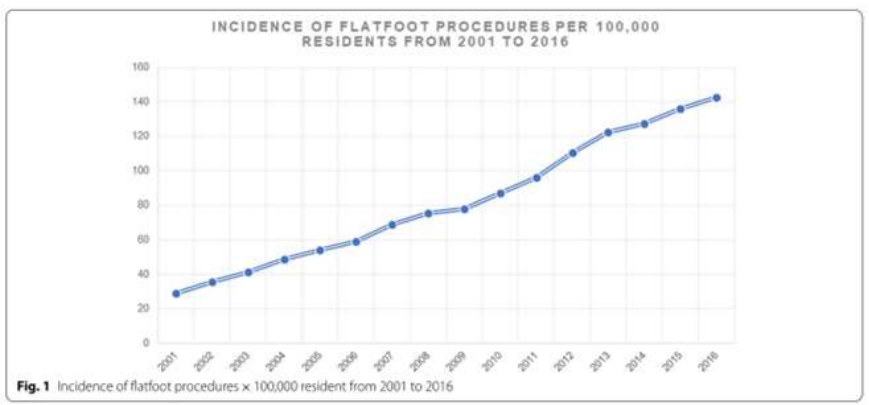

Fig. 1 Incidence of flatfoot procedures x 100,000 resident from 2001 to 2016

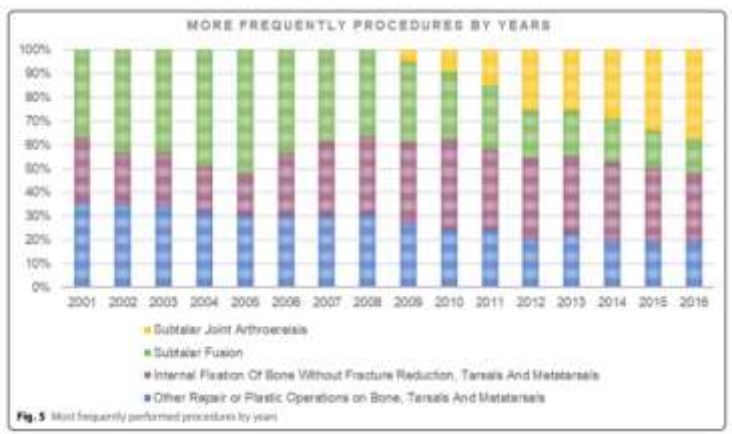

Fig. 5 Most frequently performed procedures by years


Gait & Posture

Full length article

Functional evaluation of bilateral subtalar arthroereisis for the correction of flexible flatfoot in children: 1-year follow-up

Caravaggi Paolo[a,*], Lullini Giada[a], Berti Lisa[a], Giannini Sandro[b], Leardini Alberto[a]


Foot and Ankle Clinics
Volume 26, Issue 4, December 2021, Pages 765-805

Subtalar Arthroereisis for Surgical Treatment of Flexible Flatfoot

Maurizio De Pellegrin MD [a], Désirée Moharamzadeh MD [b]


Journal of Clinical Medicine
MDPI

Article

Arthroereisis with a Talar Screw in Symptomatic Flexible Flatfoot in Children

Andrzej Bobiński [1], Łukasz Tomczyk [2], Marcin Pelc [3], Damian Aleksander Chruścicki [3], Bartosz Śnietka [3] and Piotr Morasiewicz [1,*]

2023, 12, 7475. https://doi.org/10.3390/jcm12237475

According to the present analysis, both implants appear effective in restoring physiological alignment of the rearfoot, however the endo-orthotic implant appeared more effective in restoring a more correct
frontal-plane mobility of foot joints.

These data confirm that subtalar arthroereisis with calcaneo-stop may have an advantage over subtalar arthroereisis with endorthesis as the screw is not placed across the subtalar joint but instead into the calcaneus.

There is no consensus on the technique of arthroereisis in the treatment of symptomatic pes planovalgus . Some authors suggest the use of free-floating sinus tarsi implants, some advocate for inserting screws into the calcaneus, still others report comparable outcomes irrespective of the type of implant used

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J Pediatr Orthop B. 2021 Sep 1;30(5):450-457. doi: 10.1097/BPB.0000000000000849.

Diagnosis and treatment of flexible flatfoot: results of 2019 flexible flatfoot survey from the European Paediatric Orthopedic Society

Vito Pavone [1], Gianluca Testa [1], Andrea Vescio [1], Thomas Wirth [2], Antonio Andreacchio [3], Franck Accadbled [4], Federico Canavese [5]

There is great variation among respondents in diagnostic and treatment preferences in the management of children with FFF.

The results of the EPOS 2019 FFF survey clearly show that large-scale, multicentric, international studies are necessary to elucidate which diagnostic and treatment practices lead to the best outcomes.

Results of the Italian Pediatric Orthopedics Society juvenile flexible flatfoot survey: diagnosis and treatment options

Pavone, Vito[a]; Vescio, Andrea[a]; Andreacchio, Antonio[b]; Memeo, Antonio[c]; Gigante, Cosimo[d]; Lucenti, Ludovico[a]; Farsetti, Pasquale[e]; Canavese, Federico[f]; Moretti, Biagio[g]; Testa, Gianluca[a]; De Pellegrin, Maurizio[h]

Author Information

Journal of Pediatric Orthopaedics B 31(1):p e17-e23, January 2022. | **DOI:** 10.1097/BPB.0000000000000881

Although in this survey heterogeneous findings for diagnosis and treatment of patients with symptomatic FFF within SITOP members were found, a large preference for age, heel valgus, flexibility as clinical aspects and parameters, as well as nonoperative treatment and arthroereisis, was reported.

SITOP is encouraging further research to develop evidence-based guideline to improve the care of children with FFF

Surgeon experience, implant cost, and cosmetic correction are the most common considerations included in the orthopedic device decision-making process. In obese patients, the subtalar AR is not recommended.
In adolescents who need to improve sports performance, the CS screw had better results compared with other implants. Both AR procedures improved clinical and radiological parameters. Considering the complications, calcaneo-stop screws had a slightly better rate than subtalar AR.

The exosinotarsal screw and endosinotarsal device are both effective arthroereisis implants to treat pediatric flexible fatfoot.
However, the endosinotarsal device shows a better improvement in Meary's angle than exosinotarsal screw.

Archives of Orthopaedic and Trauma Surgery (2021) 141:761–773
https://doi.org/10.1007/s00402-020-03458-8

ORTHOPAEDIC SURGERY

The outcomes of subtalar arthroereisis in pes planus: a systemic review and meta-analysis

Joelle Hwee Inn Tan[1] · Si Heng Sharon Tan[1] · Andrew Kean Seng Lim[1] · James Hoipo Hui[1]

Execution of subtalar arthroereisis is able to result in both pain relief as well as correct the underlying pes planovalgus deformity. This procedure can lead to radiological correction of heel valgus and medial longitudinal arch collapse.

The type of surgical techniques employed and the performing of concomitant procedures along with subtalar arthroereisis did not seem to produce signifcant differences.

Foot and Ankle Surgery 30 (2024) 535–545

Contents lists available at ScienceDirect

Foot and Ankle Surgery

journal homepage: www.journals.elsevier.com/foot-and-ankle-surgery

Outcomes of the "Calcaneo-stop" procedure for treating symptomatic flexible flatfoot in children: A systematic review and meta-analysis of 2394 feet

María Galán-Olleros [a,1,*], Laura del Baño Barragán [b], María Jesús Figueroa [a,c], Carlos H. Prato de Lima [d], Manuel Fraga-Collarte [a], Beltran Torres-Izquierdo [e], Pooya Hosseinzadeh [e], Ignacio Martínez-Caballero [a]

1. Heterogeneity across the included studies in terms of methodologies, patient demographics, and reporting standards
2. Exclusion of potentially informative data from gait analysis and pedobarography

To date, poor-quality evidence is available in the literature (Level IV and V)
Some studies have reported excellent results in the treatment of paediatric flatfoot with arthroereisis associated with other procedures, but, it is hard to gather reliable information mainly due to the potential confounding effect of additional procedures.

When considering arthroereisis alone, all authors reporting results on different cohorts (non-comparative studies)

We found that in clinical assessment they still used non-validated scores (for children)

Radiographic parameters not always related to the 'pathological' flatfoot

Substantial variation in the radiological parameters reported between studies
.
Only a small number of studies declared their criteria and measurement procedures for the reported charted values.

Variation in the timing of postoperative images

Lack of complete data sets in the reported case series

No studies within this review correlated changes in radiological alignments and patient reported outcome.

International Orthopaedics (2023) 47:2357–2368
https://doi.org/10.1007/s00264-023-05837-3

ORIGINAL PAPER

Flatfoot over the centuries: the background of current conservative and operative treatments

Carlo Biz[1] · Mariachiara Cerchiaro[1] · Fabiana Mori[1] · Alessandro Rossin[1] · Mattia Ponticiello[1] · Alberto Crimi[1] · Pietro Ruggieri[1]

This lack of a gold standard treatment seems to be the result of multiple points of view about pes planus, and many authors, also quoted in the present study, seem to have spent more time trying to identify the best corrective method rather than to clearly answer a crucial question on this issue:

is fatfoot a pathology, anatomical condition, or a mere phenotypic feature of the human body?

SURGICAL TREATMENT OF FLEXIBLE FLATFOOT IN CHILDREN

A FOUR-YEAR FOLLOW-UP STUDY

BY SANDRO GIANNINI, MD, FRANCESCO CECCARELLI, MD, MARIA GRAZIA BENEDETTI, MD, FABIO CATANI, MD, AND CESARE FALDINI, MD

Definition

Flexible flatfoot in children is one of the most common disorders in orthopaedics[1,2]. Despite numerous papers published in the literature, the definition and etiology of flexible flatfoot; the level of disability that it may cause; and the opportunity for, appropriate time of, and efficacy of its treatment are still open to debate[3,4]. In fact, if the foot is only morphologically flat, characterized by a lower medial arch and a broadening of the footprint, it can be well tolerated throughout the person's life. If, however, the foot is also functionally flat—that is, a foot that during weight-bearing and walking stays in a prevalent or persistent pronation—can cause secondary problems[5,6].

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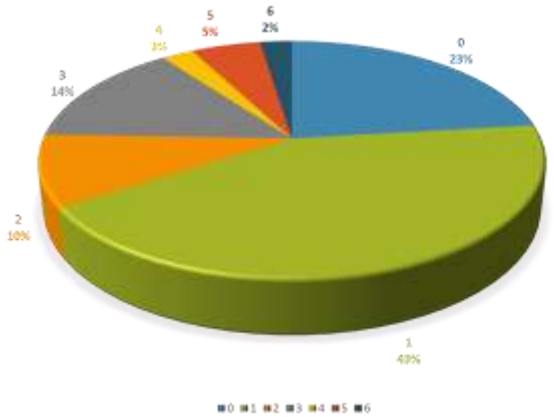
2013-2023

48,4% 279 PAZIENTI 51,6%

51,5% 454 PIEDI 48,5%

BILATERALE 175 PAZIENTI

13,2 12,9 ANNI 12,7



0 artrorisi	105
1 artrorisi + aponeurectomia gastrocnemio	194
2 artrorisi + tempo mediale	44
3 artrorisi + aponeurectomia GN + tempo mediale	65
4 artrorisi + Young	11
5 artrorisi + aponeurectomia GC + Young	24
6 artrorisi + tenotomia percutanea achilleo	11

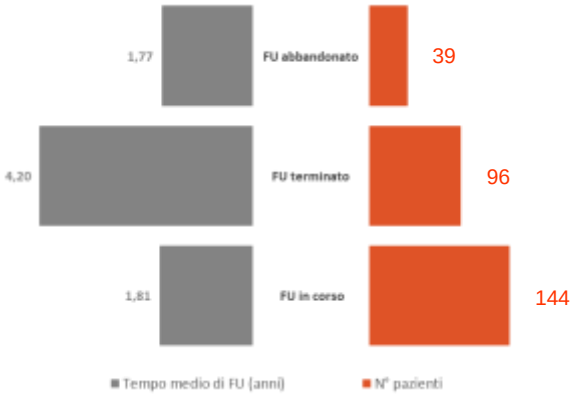
454 interventi

REINTERVENTI 48
- 8 SOSTITUZIONE DI ENDORTESI
- 40 RIMOZIONE DI ENDORTESI

25 dolorose

15 scelta del paziente

7-8%



Analisi retrospettiva
Casistica limitata, eterogenea
Complicanze non del tutto quantificabili

JBJS

"What Keeps Me up at Night": Complications in Foot and Ankle Surgery

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Modificazioni post-operatorie della dinamica del passo in pazienti con piede piatto sottoposti a intervento di artrorisi endosenotarsica + tempi accessori

Correlazione tra parametri clinici, radiografici e dati podobarometrici

Soggetti (N)	22 (12 M - 10 F)
Età	12,64 ± 1,529
Altezza (cm)	157,86 ± 10,453
Peso (kg) *	49.09 ± 9.071

Criteri di esclusione
patologie neurologiche
patologie vestibolari
controindicazioni all'uso delle app medicali

22 Artrorisi
17 aponeur GC
4 tempo mediale
3 procedura di Young

Flatfoot in children and adolescents. Analysis of imaging findings and therapeutic implications
C. Bourdet[a], R. Seringe[b], C. Adamsbaum[c], C. Glorion[d], P. Wicart[d,*]

Navicular tenosuspension with anterior tibialis tendon (Young procedure) associated to calcaneo-stop for the treatment of paediatric flexible flatfoot: clinical and ultrasound study
Elena Samaila, Ingrid Bonetti, Costanza Bruno, Emanuele Argentini, Bruno Magnan

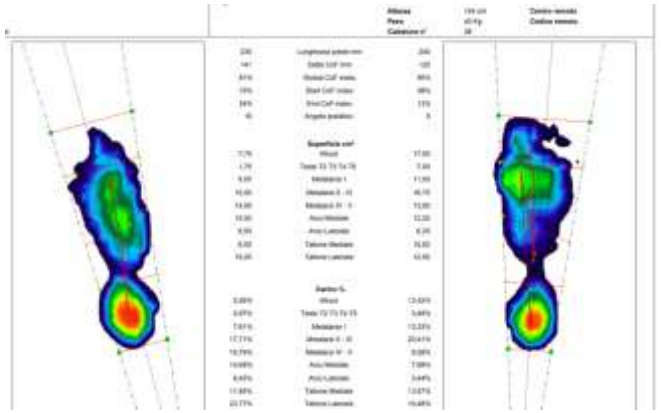
AOFAS score

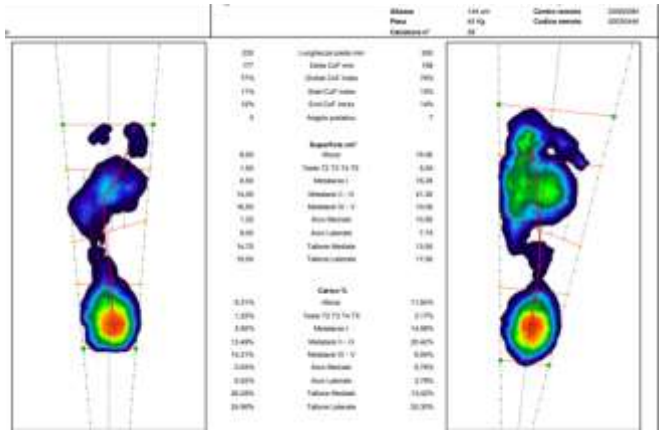
Calcaneal pitch	20° - 30°
Angolo di Meary laterale	<6°
Angolo di Costa-Bertani	120-130°
Angolo di divergenza astragalo-calcaneare	20° - 25°

Freemed™ versione Dynamic (Sensor Medica, Guidonia Montecelio, Roma, Italia)
FreeStep™ (Sensormedica, Guidonia Montecelio, Roma)

Analisi statistica
Le analisi statistiche sono state eseguite utilizzando il software Jamovi: Jamovi version 1.6 per Windows, Sydney, Australia [Computer Software]. Tutte le variabili quantitative sono presentate come media e deviazione standard (M + DS). Il test utilizzato è stato il t di Student per campioni appaiati per rilevare differenze tra più variabili nel Pre (T0) e Post operatorio (T1). La normalità dei dati è stata testata utilizzando il test di Shapiro-Wilk. Per i dati che non sono risultati distribuiti normalmente, qualora il t test fosse significativo, è stato utilizzato il Wilxcon test per confermare la significatività. Le relazioni tra i parametri radiografici e i parametri baropodometrici sono state valutate utilizzando i coefficienti di


SN





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AOFAS score

→ miglioramento del punteggio totale p<0,001
- funzione (p<0,001)
  limitazione delle attività (p=0,037)
  movimenti sagittali (p<0,001)
  movimenti del retropiede (p=0,011).
- allineamento (p<0,001)

Valutazioni baropodometriche

→ diminuzione della superficie di contatto complessiva (p=0,003)
→ riduzione della durata del semipasso p<0,001)
→ riduzione dell'area di appoggio (p<0,001) e della percentuale di carico dall'alluce (p=0,013).

Correlazione negativa tra velocità media e calcaneal pitch (ρ Spearman = -0,529 , p = 0,011)
Correlazione positiva tra durata del semipasso e calcaneal pitch (ρ Spearman = 0,499 , p = 0,018)
Correlazione positiva tra durata di doppio appoggio e calcaneal pitch (ρ Spearman = 0,588 , p = 0,004)
Correlazione positiva tra Global CoF Inedx e Angolo di Meary (ρ Spearman = 0,438 , p = 0,042)
Correlazione positiva tra Global CoF Inedx e Angolo costa Bartani (ρ Spearman = 0,519 , p = 0,013)

Parametri radiografici

→ miglioramento degli valori degli angoli considerati
→ variazioni tra T0 e T1 con significatività statistica elevata per ciascuna delle misurazioni eseguite (p<0,001).

Tali dati baropodometrici non variavano significativamente nel pre e post operatorio

- Una riduzione dell'angolo di Kite si associa ad
  - una riduzione della sup del mesopiede (Coff = 17,753; p=0,042)
  - una riduzione della % di carico dell'alluce (Coff = -12,521; p<0,001)
- Una riduzione dell'angolo di Meary si associa ad
  - una riduzione della superfice di contatto dell'alluce (Coff = 0,475; p=0,001)

Modalità	
Campione	
Gruppo controllo	
Val. funzionale	
Follow up	
Risultati	

DATI RADIOGRAFICI √

AOFAS SCORE **?**