

OSTEOARTHROSIS OF THE TALAR JOINTS IN FOOTBALLERS AND BALLET DANCERS

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Osteoarthritis of the talar joints in footballers appears to have received little attention in the literature. *Ottani* and *Betti* (1953) found the condition to be present in all of 31 players aged 19 to 43. Os trigonum was also found to be unusually common in their series. Nothing was said about any known previous fractures, dislocations or ligament injuries.

Nor does the osteoarthritis of the talar joints in ballet dancers seem to have received any interest.

A fairly thorough search of the literature failed to reveal any information on the age incidence of osteoarthritis of the talar joint.

Morris (1943) and *McMurray* (1950) reported a lesion which they distinguished from osteoarthritis and which they called "Footballer's ankle". According to them, players with this condition feel a sudden stabbing pain in front of the joint when attempting to kick the ball with the foot in full equinus. Roentgenographically it was said to be characterized by a bony ridge projecting from the anterior surface of the tibia or the talar neck at the level of attachment of the anterior capsule of the joint.

MATERIAL AND METHOD

The material consisted of 34 men, aged 21 to 46, who had been playing football regularly for more than 5 years. Seven of them had been referred for examination because of foot injury and the remainder were volunteers. Both feet were roentgen-examined in all cases except 2. Notes were made of any known previous foot injury and whether the subject was right- or left-footed. None of the men had foot pain.

A group of ballet dancers (13 females and 3 males) were also examined. These dancers were 18-39 years old and they had been in the profession for 3-30 years.



Fig. 1.

The talar joints of a 22 year old football player.

The control material consisted of roentgenograms of 123 men and 72 women examined for foot injury during the first 6 months of 1958. The controls were not known to be footballers or to have had any previous foot injury. Fresh ligament ruptures or fractures of the foot were diagnosed in 73. As a rule only one foot was examined.

RESULTS

The incidence of osteoarthritis of the talar joints in the controls did not vary with sex but, as is apparent from the diagram, it increased steadily with age, namely from 3 % in patients below 24 to 50 % in those aged 45 or more. The incidence of os trigonum did not show any relation to age. It was present in 7 % of the entire group.

All of the footballers except one were found to have osteoarthritis of the talar joints. (Fig. 1). The condition was bilateral in 27 and unilateral in 6. The player without osteoarthritis was 23 years old and all of the 6 players with unilateral changes were below 25 years. (Table I). Thus, even if only the less affected foot be considered the incidence of osteoarthritis of the talar joints will still be higher than in the control series. (Fig. 2).

TABLE I

	Age in years	Played (years)	Foot most used	Injury	Osteo- arthrosis	Os tri- gonum
1. E. F.	46	20	R	R	R > L	-
2. T. D.	43	20	L	-	R > L	L
3. H. A.	36	17	R	Both	R ≈ L	-
4. P. A. N.	34	20	R	R	R > L	R
5. A. K.	34	20	Both	-	R > L	-
6. B. G.	32	15	R	R	R ≈ L	-
7. A. L.	32	15	Both	R	R > L	-
8. K. S.	31	15	R	R	R > L	R
9. B. L.	30	18	R	-	R ≈ L	-
10. T. K.	30	15	L	R	R > L	R
11. B. P.	29	12	L	R	R > L	-
12. K. R.	29	15	R	L	R < L	-
13. B. D.	28	12	R	Both	R > L	-
14. A. S.	28	15	Both	-	R ≈ L	-
15. L. A.	28	15	R	Both	R ≈ L	-
16. G. O. P.	28	12	R	-	R > L	-
17. N. M.	27	15	Both	R	R > L	-
18. A. A.	27	15	Both	R	R > L	-
19. B. L.	25	10	R	L	R < L	-
20. H. G.	25				R	
21. L. S.	24				R	
22. A. K.	24	8	R	-	R	R
23. S. A.	24	8	L	R	R > L	-
24. L. N.	24	10	R	-	R ≈ L	-
25. G. N.	23	8	R	-	R ≈ L	-
26. A. L.	23	5	R	Both	R > L	-
27. U. N.	23	8	R	-	R > L	Both
28. H. K.	23	8	R	L	R < L	-
29. O. O.	23	6	R	R	-	-
30. S. L.	22	7	R	R	R > L	-
31. B. H.	22	6	R	Both	L	R
32. B. O.	22	7	R	-	R ≈ L	-
33. K. E. O.	22	8	R	-	R	-
34. B. F.	21	6	R	-	L	-

Of the 16 dancers examined osteoarthritis was roentgenologically demonstrable in all except 2, aged 18 and 21 years, who had been dancing for 8 and 3 years respectively. (Table II). Thus, as in football players, osteoarthritis was demonstrable in all who were above 25 years and had practised their profession for more than 8 years.

Of 15 players with previous foot injury in their history, 13 were found

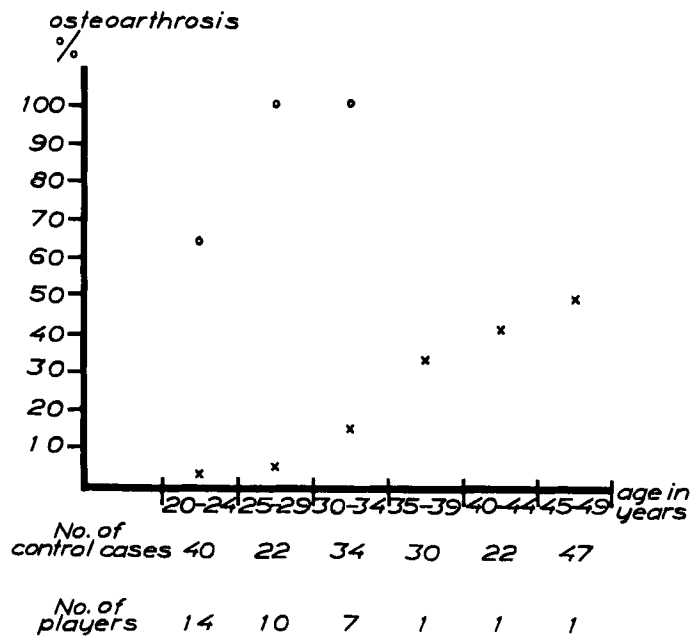


Fig. 2.

Incidence of osteoarthritis of the talar joints in footballers (O) and controls (X). The former were classed as osteoarthrotic only when the changes were bilateral. Age groups 35-49 were too small to permit percentage. All had bilateral osteoarthritis.

TABLE II

	Age in years	Danced (years)	Injury	Osteo-arthrosis
1. T. I.	39	30	R	R > L
2. B. I.	38	20	R	R > L
3. B. K.	33	12	L	R < L
4. C. L.	32	25	Both	R < L
5. S. A.	31	11	R	R ∞ L
6. C. K.	30	20	L	R ∞ L
7. H. R.	27	11	-	R ∞ L
8. L. F.	26	8	-	R ∞ L
9. H. K.	25	19	R	R ∞ L
10. R. T.	25	11	-	R ∞ L
11. P. B.	21	3	-	-
12. G. B.	20	8	-	R ∞ L
13. M. R.	19	8	L	R ∞ L
14. N. B.	19	8	-	-
15. P. U.	18	14	R	R ∞ L
16. P. B.	18	11	-	R ∞ L

to have more advanced changes in that foot than in the other. One foot was preferably used for kicking by 27 players. Of 11 subjects that foot showed more advanced osteoarthritis than the other. Of these 11 previous injury to the foot preferred for kicking was known in 7.

Eight of the dancers reported that they had on some occasion sustained foot injury. In 3 of these the osteoarthritis was more advanced on the injured side. In the remainder no definite difference was demonstrable between the severity of the changes on either side.

Os trigonum was found in 17 % of the players. This incidence is not significantly higher than in the controls.

No changes of the type said to be characteristic of "Footballer's ankle" (*McMurray*) were found in the present material of football players, but among the ballet dancers 2 cases were found.

It appears that football-playing as well as ballet dancing favours the development of osteoarthritis of the talar joints. Recognized injuries can only be held responsible for a low percentage of the cases. Neither can the actual kicking be blamed. It would appear that the increased use of the ankles causes the osteoarthritis but that the changes may also be caused or accelerated by trauma.

S U M M A R Y

Osteoarthritis of the talar joints was observed in almost all footballers who had regularly played the game for more than 5 years and in all ballet dancers who had been dancing for more than 8 years, i.e. much more often than in controls.

R E S U M E

34 joueurs de foot-ball et 26 danseurs de ballet ont été examinés.

L'ostéoarthrite des articulations du talon a été observée chez presque tous les joueurs de foot-ball qui ont joué pendant plus de 5 ans et chez tous les danseurs qui ont dansé pendant plus de 8 ans, c'est-à-dire dans un nombre de cas beaucoup supérieur à celui du groupe de contrôle.

Z U S A M M E N F A S S U N G

34 Fussballspieler und 26 Ballettänzer wurden untersucht.

Osteoarthritis der Talusgelenke wurde fast bei allen Fussballspielern, die mehr als 5 Jahre regelmässig gespielt hatten und bei allen Ballettänzern, die mehr als 8 Jahre getanzt hatten, d.h. viel häufiger als in Kontrollfällen, gefunden.

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