

# Medical Problems of Young Soccer Players

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## Introduction

SPORTS TODAY is no longer a tool of leisure. It has assumed an important role in the embellishment of the National image, and in this context the sports doctor has a very vital role to play. Apart from propounding a scientific basis for the training of competitive teams, doctors accompanying sports teams have often not been able to be effective in the past unless they have been past participants of the particular sport. Hanley (1972) outlined the health measures taken in the Olympic Games. Ryan (1962) has also given us the benefits of his experience in the medical care of athletes. Jegathesan (1973) outlined the patterns of illness and injury in the Malaysian contingent to the Munich Olympic Games. With all this literature, and much more, the sports doctor need no longer rely on his former experience. This study is a small contribution as it has one significant difference. The study is confined to a group of young soccer players competing in a highly competitive tournament where the National image is at stake, and it is hoped that the pattern of injury and illness portrayed and the positive role that the sports doctor can play, will contribute to the advancement of sports in this country.

## Materials and Methods

The subjects under study comprised 18 Malaysian youths aged between 18-20 years. The study was conducted over a 11 day period during the 15th Asian Youth Soccer Tournament at Tehran, Iran, in 1973. Observations were derived from ailments treated at the Doctor's Room which was open from 8 p.m. to 10 p.m. every night. Officials accompanying the team were excluded.

The Tournament was covered by a Group Practice under Medical Insurance and comprised

a daily clinic at the place of residence of all teams, a downtown Polyclinic staffed by Specialists, and with access to hospitalisation, and Medical stations at the places of competition, somewhat following the pattern as outlined by Hanley (1972).

Physical medical examination and treatment of incidental ailments e.g. dental caries, were carried out on the team during centralised training in Malaysia on a group of 23 subjects. Only data on the final 18 are included in the present paper.

## OBSERVATIONS & RESULTS

### Coincidental Illnesses

The most outstanding observation was the 100 per cent incidence of cracked lips, chaffed skin and even nose bleeds as a direct result of the dry and cold climate of Tehran in Spring. It is probable that the same factor, coupled with the increased rate of respiration during exercise created by the high altitude of 4,000 ft, were responsible for the high incidence of upper respiratory tract infection. There was some indication that smoking contributed or aggravated the condition. Nine persons showed signs of chronic rhinitis at the medical examination before departure, and of these six who did not smoke, were not affected. Five players were known to be smoking secretly during the tournament, and of these 4 suffered from upper respiratory tract infection. However, there were two severe cases complicated with pyrexia, and they had to be treated with antipyretics and antibiotics. Both had smoked. In addition, two officials increased their smoking load. One developed cough whilst the other contracted severe upper respiratory tract infection with fever. (See Table 1).

All cases of constipation and diarrhoea were mild.

**Dental caries**

Dental caries was detected in five players at the preliminary physical examination and of these three had treatment. However, one player developed severe toothache during the Tournament and had to be referred to the Dental Specialist to have his wisdom tooth extracted.

**Direct Injuries through Participation**

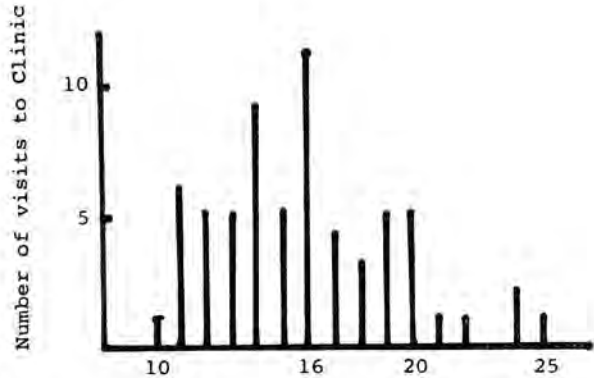
It is interesting to note that the highest incidence of injury sustained during training and participation was that of cramps and spasm of the muscles of the leg (35 visits out of 76) which was almost a daily affair. Treatment by massage seemed to relieve all the cases. This also seems to be the result of the cold temperature. The highest number of such spasms was associated with one training session held where cold winds direct from ice-capped mountains dropped the temperature to 45°F. (ref. Table 2).

It is also interesting to note in Table 2, the vulnerability of strikers, 4 of whom sustained 10 different complaints from direct injury, whilst another 10 injuries were shared by 6 backs. Both mid-field men had one injury each. But if muscle cramps are excluded, of the 14 injuries, 8 were sustained by strikers (knee (4), shoulder, ankle and thigh - 2 each) (see Table 3). This pattern shows some similarity with Hill's (1964) report.

The total number requiring medical attention, excluding officials, was 14 out of 18. Of these, 12 were derived as a result of direct injury and 2 were coincidental. This also does not include ointment for cracked lips. Out of the players receiving treatment for direct injury (12), 7 did not have any coincidental ailments. The total number of visits recorded was 76 during the period between 10th - 25th April, as many of them came for multiple complaints and some for the same on multiple occasions.

**Frequency**

The frequency of visits to the Doctor's Room is shown in Fig. 1, and is confined to the period of stay in Tehran and the journey back to Kuala Lumpur. The frequency of visits tended to rise with the approach of each match and there was a peak after the game was played due to injuries sustained during the match. However, after the last match only the more severely injured visited the Doctor, and there was a complete withdrawal from treatment as there was no prospect of another match.



DATE in APRIL, 1973  
 Fig. 1  
 Histogram of Frequency of visits to Doctor's room during the Tournament

Frequency of visits to Doctor during the period of the 15th Asian Youth Tournament, 10-25 April, 1973. Malaysia played two matches, on 16th and on 20th. The Clinic was open from 8 p.m. to 10 p.m. every night.

This is also the pattern reported by Jegathesan (1973) at the Munich Olympic Games of 1972.

**Discussion**

In a study where a narrow age group is participating in a specific sport certain peculiarities become evident. Recovery time for young athletes between 18 - 20 years is always rapid, and injury seems to be not as severe as when played by older and more experienced players. Discipline was easier to maintain, and thereby controlled the incidence of gastrointestinal upsets common to teams travelling to foreign countries (Hanley, 1972).

The pattern of injury and illness was similar in many respects to that found by Jegathesan (1973) for soccer players. Coincidental illnesses featured upper respiratory tract infection in both studies. This bears out findings by Hanley (1972) that in athletes at their peak, i.e. during competition, the most common diseases are upper respiratory tract infection, gastrointestinal upsets and skin complaints, in that order, and the importance of abstaining from smoking cannot be over-emphasised on the basis of this study as well.

In the incidence of injury directly resulting from participation in the sport, contusions form the highest in the Jegathesan (1973) report, but only the next highest in this report. Here, the highest incidence was muscle cramps, noticeably aggravated by the cold. On cold days, especially one training session where icy winds swept down snow capped mountains right onto the training

**Table 1**  
**Coincidental Ailments**

Ailment	No. of Visits	Total No. of Players affected	Percentage of Players affected
Upper respiratory tract infections	12	6	34%
Constipation	4	4	22%
Diarrhoea	3	3	17%
Abscess	1	1	6%
Toothache	1	1	6%
Suspected appendicitis	1	1	6%
Cracked lips & skin	continuous	18	100%
*Dental caries		5	28%
*Motion sickness		4	22%
*evidence of chronic rhinitis		9	50%
	— 22		

\*Ailments which were discovered at preliminary examination of the team during centralised training and during travel.

Table denotes frequency of visits and numbers of players affected

**Table 2**  
**Frequency of Injuries Resulting Directly from the Game**

Type of Injury	No. of Visits	Total No. of Complaints	Position of player
<i>Abrasions</i>			
Hip	2	1	striker
Thigh	2	1	striker
<i>Lacerations</i>			
Dorsum	1	1	back
<i>Contusions</i>			
Knee joint	5	1	striker
Ankle joint	1*	1	striker
Quadriceps	5	1	back
<i>Haematoma</i>			
Knee joint	5	1	striker
Deltoid	2	1	striker
<i>Spasm of Muscle</i>			
Quadriceps	11	3	striker midfield back
Hamstrings	8	2	striker & back
Gastrocnemius	16	4	3 backs & striker
Peronei	4	1	striker
<i>Strains (1st degree)</i>			
shoulder	1	1	back
wrist	2	1	striker
knee	2	1	back
<i>Recurrence of old injuries</i>			
Knee (medial meniscus)	4	1	midfield
Ankle (lateral lig.)	5	1	back
Total	76	22	

\*did not come for further treatment as three were no more games to be played.

**Table 3**  
**Frequency of Injury to various Regions of the Body**  
 (Not including spasms of muscle)

Region of Body	Total No. of Injuries	Playing striker	Position midfield	back
Shoulder	2	1		1
Wrist	1	1		
Hip	1	1		
Knee	4	2	1	1
Ankle	2	1		1
Thigh	2	1		1
Peroneal region	1	1		
Foot	1	1		
Total	14	8	1	5

pitch, the resultant evening clinic was crowded out. Low temperatures also seem to magnify and aggravate slight injuries. The pattern also seems to fit observations by Hill (1964) and Ryan (1962) where ankle and knee injuries seem to be most serious and took the longest time to mend. Shoulder and wrist injuries seem more common to strikers who seem particularly vulnerable to deliberate fouls, and who are often running at top speed when a fall results in multiple injuries (Table 3). There was one centre back who was suffering from "footballer's ankles" as described by Ryan (1962) and this was subject to constant recurrence. Muscle strains and cramps responded well to treatment by massage after complete rest for from a few hours to 36 hours depending on the severity of the injury (Ryan, 1962).

Perhaps, the most important findings of this report lies in the realisation that the doctor who accompanies any sports team should be "counsellor, health educator, physician, and have an athletic personality with an understanding of the psychological and sociological motivation of his team" (Dolan, 1967). In addition he should have a sound knowledge of the treatment of injury and physiotherapy.

Some other problems have to be considered as well. Hanley (1972) has pointed out some problems for the team doctor. A foreknowledge of the environment of the host city, the fluctuations in climate, altitude, water, food, amenities and sanitary conditions, and endemic diseases, are necessary. In this instance some knowledge of the host city was obtained from the library, and

the first problem encountered was to acclimatise to the change in time which affects circadian rhythm. The time difference of 4 hours and 5 min was adjusted within 24 hours. The next problem encountered was the difficulty in breathing cold, dry air at an altitude of 4,000 ft. This was accomplished by forced training and was corrected within 2 days. This factor, no doubt, contributed to the high incidence of upper respiratory tract infection.

Dietary problems were rather more severe than expected as the question of palatability forced itself to the forefront. Good foresight on the part of the coach solved this problem. He had brought an adequate quantity of canned Malaysian food. This question of dietary preference must always be considered a major issue, as psychologically, its effect on performance can be disastrous. In addition, as food at these type of competitions is always excessively supplied, a daily weight chart of all players was kept to avoid adiposity.

Last of all, a few words on the relationship between the doctor, the officials and the team as a whole. Unity is a must. A knowledge of the game is not mandatory but goes a long way to achieve this goal. The ideal doctor should be physician, physiotherapist, an expert in public health and preventive medicine, counsellor, sports politician and tactician, psychologist, have a good knowledge of the game and be willing to devote all his time to the team.

### Summary

The medical problems of a group of soccer players aged between 18-20 years, were studied during the 15th Asian Youth Soccer Tournament at Tehran, Iran, in April, 1973. The patterns of illness and injury concurred with that of other reports. Upper respiratory tract infections form the highest number of coincidental illnesses. In this study, the cold and dry climate, and smoking were found to be contributory factors. The climate also induced a high incidence of spasms of the muscles of the legs which were easily triggered off. This was the main difference between this study and other studies. Again, as in other reports, contusions form the majority of injuries resulting directly from the game. The role of the doctor accompanying the team in terms of treatment of injuries and illnesses, advice on adjustment to time, environment, climate and sanitary and dietary factors, and his dedication to his duties was discussed.

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