The medical aspects of professional association football

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ASSOCIATION football is our national game and the professional part, its shop window. Watched by some thirty million people each season, the 92 Football League clubs provide entertainment on a large scale, and the professional game is big business. It is hard to realize that as recently as 1961, the record transfer fee paid in England for a professional footballer was £55,000; today it is near £200,000. This marked increase in the financial value of players relates to an administrative decision in 1961 to remove the maximum wage a professional footballer could earn. Overnight, the £100-a-week player became a reality, and the financial value of players rose substantially on the transfer market. The reality of present day professional football is that every player has a financial value; he is a financial asset to his club; the stock-in-trade of football. A professional club may value one of its players at over £100,000, its total playing staff at well over a million pounds. These financial values depend on the players being mentally and physically fit, for the moment a player is injured, or loses form, his financial value decreases, and his club suffers the loss of a financial asset. It is against this background of high finance and entertainment on a large scale, that the medical care of professional footballers takes place today.

The directors of the professional clubs, knowing the financial value of their players, realize that their medical care and welfare is of paramount importance. The cold businessman's approach is that if the playing staff is valued at a million pounds it must be looked after as such. The directors of the more enlightened clubs have built treatment and rehabilitation units within their own grounds which would be the envy of many a small hospital. These treatment units allow full-time treatment and rehabilitation to be carried out at the players' club by the club's own medical staff. The typical treatment and rehabilitation unit (adequately described in *F.A. News*. January, 1967)[1] consists of a consulting room, treatment room, remedial gymnasium and hydrotherapy pool, thus providing the players with all the facilities of a well-equipped hospital physical medicine department. These well equipped medical units may be considered a luxury in that they exist usually for a playing staff of some 40 players, but they emphasize the importance that football administrators place on having well-equipped treatment units at their disposal within their own clubs.

The Football Association[2] showed that the vast majority of professional clubs appoint a general practitioner as their team physician, and Buck,[3] himself a club director and orthopaedic specialist, suggests this to be correct, believing the general practitioner "to be the 'real' doctor qualified in both the science and art of medicine". While some professional clubs pay their team physician an honorarium, the vast majority act in an honorary capacity; many doctors are on the board of directors at their club, acting as a medical director. Although the club doctor is the team's physician, he will work in close co operation with the various hospital specialists calling on their expertise as and when necessary, in the same way that the general practitioner does for his patients. A good medical team covering all the specialities is built up and this is absolutely essential

for the modern professional club. In addition to the team physician, a professional club may employ a full-time physiotherapist to carry out the full-time treatment and rehabilitation of its players, although this work is often carried out by the club trainer.

The present day trainer at a professional club is far removed from the cloth cap and wet sponge image of bygone days. Invariably an ex-player, the senior trainer will hold the Football Association Treatment of Injury Certificate. This certificate is obtained by passing a three-year summer course, held each year at Lilleshall, in anatomy, physiology, pathology, rehabilitation and the treatment of injuries. This certificate demands a high standard of academic knowledge and practical skill and includes the writing of a thesis in the final year. The qualified trainer of a professional club thus has a good basic knowledge of the treatment and rehabilitation processes and is perfectly capable of working under medical supervision.

All professional clubs insure their playing staff through The Football League Insurance Scheme against permanent injury and temporary disability. Each player before being accepted into this insurance scheme must undergo a routine medical examination, which includes radiological examination of the joints of the lower limbs. Each professional player has, therefore, at his club his own medical file, in which is kept the record of his medical examination, and a record of each injury as and when it occurs. Although there is a standard medical examination, further medical studies vary from club to club depending on the enthusiasm of the medical team, and may include haematological, electrocardiographic, and fitness parameters. In this way the normal medical state of each professional player is determined and kept on record at the club.

Bass [4] and Phillips [5] have shown in two independent surveys spanning nine seasons, considerable similarity in the type and incidence of injuries occurring in professional footballers. Over 75 per cent of all injuries sustained in both these surveys occurred to muscles, tendons, and joints, the so called soft tissue injuries. Thus the organization of the medical unit is geared to deal with these common injuries which are diagnosed, treated and rehabilitated at club level. A full-time, dynamic rehabilitation unit exists within those clubs and a high morale is obtained where the injured player is under constant observation by the medical and auxillary staff. The management of soft tissue injuries, based on the main pathological principles of tissue injury and the repair process, are described fully in the article by Bass. Good rehabilitation is concerned with returning the individual to his full employment. In that professional footballers demand a high level of physical fitness the aim in all treatment and rehabilitation is to obtain a full 100 per cent recovery, for little less will be acceptable. This is not as difficult to obtain as may at first appear, for most of the injuries are of a minor nature.

The variety of injuries sustained by professional footballers is illustrated in table I.

TABLE I

INJURY SURVEY AT MIDDLESBROUGH FOOTBALL CLUB 1963–1968

	Number	*Per cent*
Joint injuries ..	167	*46.5*
Muscle and tendon injuries	119	*33.1*
Fractures	11	*3.0*
Back injuries ..	5	*1.4*
Head injuries ..	3	*0.8*
Other injuries including illnesses ..	54	*15.2*

Joint injuries See table II.

TABLE II

JOINT INJURIES

Injury	Number
Haematomas, in relation to joint	58
Ligamentous injuries to the knee	37
Ligamentous injuries to the ankle	47
Traumatic effusion of the knee	6
Traumatic effusion of the ankle	1
Meniscus injury	6
Wrist injury	3
Elbow injury	2
Acromioclavicular joint	2
Interphalangeal joints of the toes	2
Interphalangeal joints of the fingers	1
Dislocations	2

There were, 109 true joint injuries and 58 haematomas, in relation to the joints in this series of 167 joint injuries.

Muscle and tendon injuries

Muscle and tendon injuries accounted for 119 (43.1 per cent) of all injuries. Of the 119 muscle and tendon injuries, 61 were haematomas, and the remaining 58 were partial tears and strains, table III.

TABLE III

SITE OF HAEMATOMAS ASSOCIATED WITH MUSCLE AND TENDON INJURIES

Site	Number
Quadriceps muscle	29
Calf muscle	25
Anterior tibialis muscle	4
Buttock	2
Brachialis muscle	1

Total haematomas occurring in this series amounted to 119. Fifty-eight of the haematomas occurred in relationship to a joint and 61 occurred in relation to a muscle.

The 58 partial tears and strains had the following distribution:

Site	Number
Quadriceps	17
Hamstrings	16
Adductors	13
Calves	10
Abdominal muscle	2

The 58 haematomas occurred in relation to the following joints:

Joint	Number
Ankle joint	40
Knee joint	13
Foot	2
Elbow	2
Thumb	1

It is seen, therefore, that the ankle is a very vulnerable joint in football injuries. It will also be seen from this five-year survey of injuries that the major causes of disability are muscle, tendon and joint injuries, since these represent over three quarters of the total number of cases seen.

Other illnesses

Tetanus is an occupational hazard of any footballer and all professional footballers should be immunized against the disease, and the immunological state always kept up to date. Clubs playing in European and World Competitions should receive protection against smallpox, typhoid and paratyphoid fever, and poliomyelitis preferably in the close season, to avoid interruption by untoward reactions during the playing season. The participation in overseas competitions has brought many problems to

the team physician; problems of air travel,[6] biological rhythms,[7] exotic diseases,[8] nutrition and hygiene,[9] heat stress,[10] casualty evacuation and the provision of hospital services in foreign lands.

No discussion of the medical aspects of professional football would be complete without an awareness of the mental and physical stress to which the players are subjected. In recent years the playing season has been increased to ten months and the game has demanded higher levels of physical fitness and endurance. To maintain these high levels of physical fitness over a period of ten months needs a continual assessment of the training programme, in order to avoid the development of mental and physical fatigue. Forever exposed to the glare of television, press, and the public, the professional footballer must develop a mental toughness to equate his times of adulation with those of bitter criticism. To this must be added the emotions and tension of being personally involved in the big occasion, where success can bring high financial reward, and failure produce depths of despair.

The team physician is an integral member of a highly-motivated professional staff, concerned with success on the field of play. The inter-staff relationship is important in developing a successful unit within the club. The team physician will be asked for advice on the development and nutrition of young players, the training programme, the mental and physical fitness of players, the players' family problems, his illnesses and injuries, in fact the whole man that goes to make up the professional footballer. The team physician must develop a close relationship not only with the staff, but also with the players, a relationship that develops in confidence with time, a relationship to which the practitioner interested in football is admirably suited, and from which he can derive much satisfaction.

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Depressive illness in a general practice. A demographic study and a controlled trial of imipramine. A. M. W. PORTER, M.D., D.OBST.R.C.O.G. *British medical journal*, 1970, **1**, 773.

Ninety-three consecutive patients with depressive illness were studied. There was a significantly higher incidence among married women than among single women or men. Sixty of these patients took part in a double-blind trial of imipramine, and it was concluded that there was no superiority of the drug over a placebo. It was concluded that most of the cases of depression seen in general practice are mild and self-limiting—although with a tendency to relapse. Cases seen in hospital outpatient departments are " selected and untypical of depression at large". This trial has no bearing on the efficacy of imipramine in hospital practice.