

Jack Foster, consultant neurologist in Newcastle upon Tyne, describes a neurological complaint that could be epidemic at Turnberry next week.

PUTTING ON THE AGONY . . .

In 1888, the year J. & A. Churchill published the first edition of Gowers's *A Manual of Diseases of the Nervous System*, Jack Burns holed out the St Andrews' links in 171, over 36 holes, to win the Open Golf Championship from fifty-three other competitors. The first Championship at Prestwick in 1860 attracted an entry of eight but, since then, and particularly in the post-war years, not only has the prestige and popularity of the Championship increased but the financial significance of the tournament has become almost notorious. The British Open is one part of the modern golfing four-part Grand Slam (with the American Open, PGA, and The Masters at Augusta). At St Andrews in 1946, the year of the first post-war tournament, Sam Snead holed the old course in 290 strokes over four rounds to fend off 225 other entrants. Hogan at Carnoustie in 1953 won with 282 against 196 opponents, and in 1976 at Royal Birkdale another American, J. Miller, won with an even better 279, from 719 entries.

Sir William Gowers was not a great golfer, but is remembered as one of the nineteenth century's most articulate and revered neurologists. In his writings he described the occupational neuroses, a term adopted from the German ("*Beschäftigungs-neurosen*") and defined the term as "a group of maladies in which certain symptoms are excited by the attempt to perform some often-repeated muscular action, commonly one that is involved in the *occupation of the sufferer* . . . Other acts do not excite the symptom and are not interfered with. The most frequent symptom is *spasm* in the part, which disturbs or prevents the due performance of the intended action."

He specifically described writer's cramp, first defined by Bell in 1830 and termed later scrivener's palsy by Solly. He discussed the other craft palsies of the violinist and piano-forte player, seamstress's, telegraphist's, and smith's cramp. He commented on previously reported occupational cramps and palsies in painters, harpists, artificial flower makers, turners, watchmakers, engravers, masons, composers, enamellers, cigarette smokers, shoe makers, milkers, money counters (tellers), and zither players.

Since Gowers there have been further descriptions of the so-called "occupational neuroses" but our understanding of the pathophysiology of these crippling disorders remains incomplete. Vivian Poore in *Nervous Affections of the Hand* describes his experience up to 1894 with 300 cases of writer's cramp, and J. Collier followed with a major description of telegraphist's cramp from the Central Post Office personnel. Neither could define the pathogenesis.

Recently, in *Music and the Brain*, Critchley has reviewed

the subject of occupational palsies in musicians. He mentions the "violinist's cancer", an occupational cramp involving the bowing hand "causing an audible and offensive extension of the note".

Most doctors in clinical practice have experience of cases of writer's cramp. At first the patient notices a stiffness of the fingers induced by prolonged use of the pen or pencil. The stiffness develops, after a progressively shortening latent period, and extends to involve the thumb and first finger. Ultimately the action of putting nib to paper is sufficient to destroy the acquired skill of writing. An attempt to outline the first syllable or letter results in an often painful and crude spontaneous movement, at times sufficient to fracture the nib or rip the paper. The cramp is quite specific for writing. Sufferers are able to play instruments or execute other fine and detailed repetitive movements without any attendant strain in the hand or fingers. Commonly affecting those who write for their living, for example court stenographers or shorthand typists, this disorder is inexorably progressive. Using a pen with a large diameter shaft or writing from the elbow or shoulder can help for a time, but eventually writing becomes impossible. A change to the other hand may provide temporary alleviation. After using a typewriter for months or years the condition comes to affect both limbs and the sufferer is reduced to using first and second fingers together, punching individual keys from the shoulder.

The patient is not usually overtly neurotic, the condition shows none of the accepted accompaniments of hysteria and most would now hold that what we are seeing is a rogue conditioned reflex. It is as though the attempt to communicate the symbol or idea triggers the motor response. In writer's cramp the symbol is in script form, in the other palsies musical expression, or the less subtle Morse code.

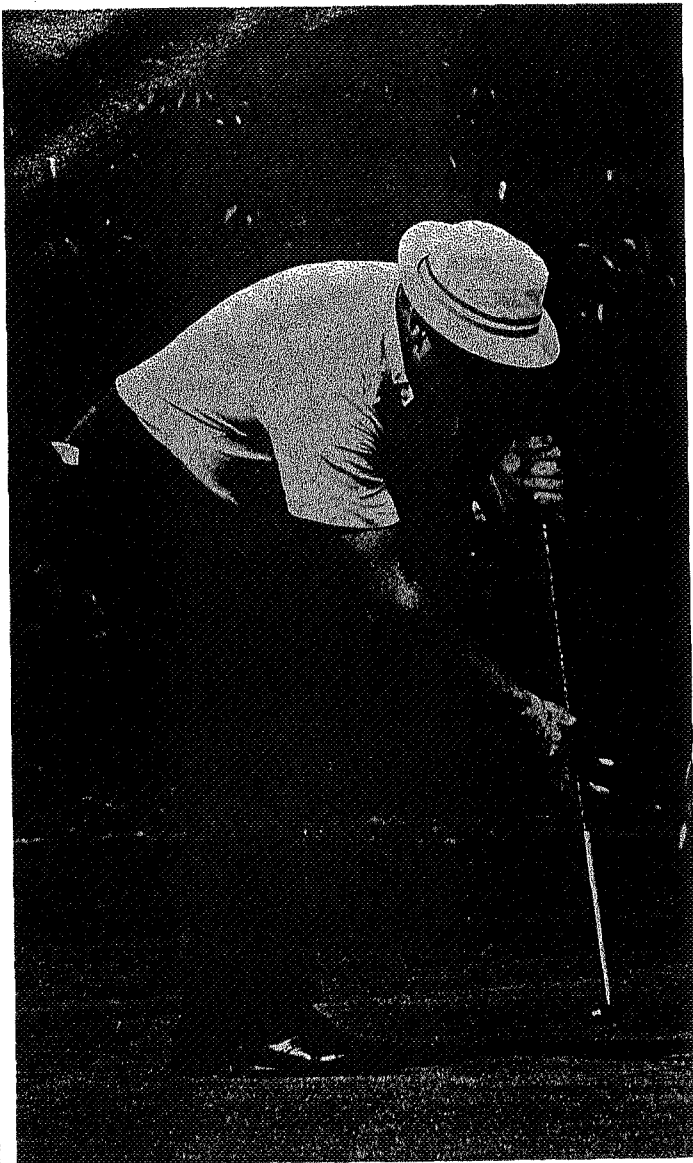
The affected movement is *skilled*, ie it has been carefully learned and often performed, frequently after hours of assiduous practice. The attempt to initiate the learned motor skill immediately triggers the spasm and leads to disintegration.

Neurology and the British Open

Since the condition has not attracted a great deal of interest in the recent literature and is not common, the reader may well ask what relevance it has to *World Medicine* and the British Open Golf Championship.

Some golfers are born with a natural flair for the game, a superbly co-ordinated neurological servo system which allows them, without much practice or tuition, to execute a curious, repetitive movement sufficiently powerful to project a golf ball upwards of 250 yards. These lucky few soon join the professional ranks where the financial rewards at the top are prodigious. Having acquired the method, the golfer is intent on holing out the course in the least number of shots. From tee to green he will require one, two or three shots depending on the par of the hole, using the same "grooved" swing from shorter range. Having "made" the green the object is then to hit the ball into the golf hole. The nearer he is to the hole the more precise must be his stroke, for he is attempting to hit a 1.62 inch sphere into a 4.25 inch hole in the ground, over a short distance, on grass where pace

Four by four



Golfer Sam Snead adopted this most unusual style of putting—the side-winding technique—to overcome the “yips”.

and tilt or borrow are all-important. It is in this sphere that the competitive or professional golfer suffers the greatest strain and it is in this purposeful act of “holing out” that he can win or lose his match, his medal or indeed his Open Championship. Not only by a fault in the putting stroke, but also by incorrectly assessing the pace and borrow on the green he may, and often does, miss otherwise holeable putts. The likelihood of a miss is made all the more by the importance of the occasion. What golf addict can forget his vicarious anguish as Doug Sanders missed the short putt running downhill left to right on the last green at St Andrews in 1970 which would have allowed him to win his first Open Championship. Subsequently he lost to Jack Nicklaus in the play-off the following day.

We understand how some golfers under stress may miss short putts and it is a common personal experience. Lack of attention, a false assessment of the line or a poorly timed, somewhat nervous, stroke may all be responsible. I would

put to you, however, that there is a more sinister cause for the agony of over-frequent missing of short putts—a disease in golfing terms described as “the jerks”, “the yips” or “the twitch”. The condition is not common but has upset the careers of some very famous and successful players. Hogan was at his peak in 1953 and after two weeks of almost fanatical preparation at Carnoustie he had the unique distinction of scoring less in each of his consecutive four rounds. His golf was near flawless and he fully justified the accolade of the greatest professional of his era. He stayed at the top of the tournament tree for a few more years only. His putting stroke deserted him and he was accused of developing “the yips”. Apparently he “froze” on his short putts, and found himself unable to take the club away from the ball because of spasm developing in the fore-arms and hands. He now plays little competitive golf.

Side-winding technique

Sam Snead, winner in 1946 and still a successful tournament player in his sixties, had the disease. He became incapable of holing short putts. Subsequently he learnt to putt facing the hole with the ball between his feet and after this was declared illegal he developed the “side-winding technique”. One of the greatest players and one of the most beautiful swingers of a golf club ever seen has been reduced to crouching, feet together, facing the hole, with the putter held at the top with a reversed left hand grip and the right hand, index finger extended, pushed down the extended grip. Some 18 inches separate the hands. From this curious and awkward position he putts with the ball outside the line of his right foot with a fluent swing and no hint of the jerk or spasm which had eroded his previous conventional method.

The strains on our early Open Champions and tournament winners at the turn of the century were insignificant. There were few competitions and little publicity. Now, with the enormous financial rewards available to the stars, where the difference between winning and losing can mean millions of dollars, where a critical golfing world is watching on television, it is not surprising that we are seeing the emergence of a new form of occupational cramp akin to the craft palsies described by Gowers and his contemporaries. I feel that in the putting “twitch” we have yet another latter day occupational cramp. It can be defined as “a spasm of the muscles responsible for the purposeful act of holing out, sufficient to destroy the fluency of the stroke or even prevent its initiation.

We can sympathise with the stars of yesterday who have faded from the top of the charts just as the violinists, pianists, and stenographers faded from the pursuits of their choice in the past.

It seems to be the case that only the expert is at risk on the putting green, perhaps because of the financial motivation behind the putting act, but if next Sunday morning you feel a little tightening in the thumb and forefinger of the right hand as you face your short 50p putt on the eighteenth green, beware, and recall Sir William Gowers—“the commencing symptoms often pass away with a brief rest; a month’s abstinence at the onset will do more than a year’s rest.” . . . God help you! ■