

## THE EMOTIONS, MUSCLE TENSION AND RHEUMATISM

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**A** MULTITUDE of varying conditions receives the label rheumatism; a conglomerate assemblage in which pain is located in the soft tissues of the body, yet differing in site, location, manner of disturbance of function and variety of sensory experience. Superficially indistinguishable complaints receive distinctive nomenclature: non-articular rheumatism, myalgia, muscular rheumatism, fibrositis, myositis and the obese panniculitis are offered by some practitioners. Others offer a classification dependent on site affected when the names lumbago, torticollis, pleurodynia or frozen shoulder designate the afflicted area. A personal predilection for nomenclature may, however, be influenced by the patient's presentation of his symptoms, or physical findings. Muscle stiffness, spasm or tenderness may be found with resultant mechanical defects and postural changes. Crepitus or nodule formation may occur, but are also found without complaint of pain. Specialized movements or pressure at certain 'trigger spots' cause exacerbation of pain in the complete absence of any pathological changes. Symptoms vary as to time of onset, aggravation by particular acts, pace of movement, rest under certain conditions, pressure at certain points. The character of the pain is variable, intermittent or constant and is described as soreness, dullness, dragging, bruising, knifelike or excruciating.

Treatment is as variable as theories of causation. Rubefacients, analgesics, steroids, injections, physiotherapy, manipulations or operative measures are no more efficacious than the acceptance and toleration of symptoms with self-medication. A tendency to spontaneous healing exists with phasic recrudescences. The site is selective for the individual. Just as the child has the constant recurring pain in the left ear, moist sounds at the right lung base,

or a blocked right nostril so the adult has pain in or around the lumbosacral joint, upper arm or thigh. All that is certain is that the patient complains of a variation of sensory experience, that is, localized pain.

If the main symptoms of pain and limitation of movement are noted but consideration given to concomitant ailments, invariably tiredness, listlessness, fatigue and irritability with lack of appetite, anxiety, insomnia and depression are reported. These symptoms are usually accepted as resulting from the physical effects and limitations imposed on the sufferer and never evaluated in their own rights. The man has pain and therefore should be depressed, anxious, and apprehensive of his inability to work, walk or bend, for the future. In following these psychological symptoms, in attempting assessment of the varying gaits, postural and behavioural changes, in ascertaining why peculiar acts rather than particular motions are frustrated, the finding of constantly recurring psychogenic implications must prejudice a complete reassessment of aetiology and causation.

The patient's assessment of his own condition is always comparative, evaluating his present condition in terms of past experience. "My back aches", "I have pain in my shoulder", "I can't move my neck", convey his supplication for help and relief of his suffering. He has thought of his illness, discussed it with his family and friends and at last presents himself to the doctor. He may vary his approach depending on his personality. He may minimize his complaints as if afraid that his body is at fault. Alternatively, he may enlarge, ensuring no underestimation of his sufferings.

A patient desires, in his appeal to the doctor, restoration of harmony of the body. He complains of and seeks help. He tells of his physiological or anatomical abnormality expecting relief, both physical and mental. But his entry has already been keenly observed. His gait, his manner of seating himself, his posture, his rate of breathing, facial expression, his rate of blinking, his colour, the cut of his hair already evoke in us some response. His smile may contradict his unhappy eyes, his rate of breathing alarm us, a firm tread indicate his vitality, his movement of a chair, his command of the situation, sitting on the edge of the chair, his impulsiveness, the shuffle of his feet, the heaviness of his limbs and movements, his slow hesitating speech depress us.

As he speaks we note the turn of his lips, his pauses, hesitations, stammer, eye movements, tooth sucking, coughs, shrugs, sniffs,

swallowing and throat clearing and forced respirations.

The patient has already offered much more than words. He has stated his case, responded to the usual questions and at the same time volunteered by gesture, mime, inarticulate sounds, the language of the eyes and other senses, supplementary information. This additional knowledge, unfortunately, is usually ignored rather than evaluated.

Without stress or emphasis on either physical or psychological aspects of his illness, the patient is able to focus his attention on either field or both. Freedom of selectivity allows him to correlate the two. Dealing in this way with a patient allows the illness to remain 'unorganized' (Balint, 1964). Disease is accepted as the departure of the individual from health. It is a personal expression and conveys, like the shape of his nose, the colour of hair and eyes and manner of speech, automatic attitudes and feelings within us. Similarity of symptoms, the resultant effects of usage of the bodily systems, appear to indicate a parallelism of causation. In disease of the voluntary musculature function must be disturbed. In the absence of evidence of organic origin, where congenital, infective, degenerative or traumatic processes are absent, where lesions of the central nervous system or referral from other areas are not manifest, what can occasion the symptom?

True diagnosis must take into consideration all symptoms. Words and emotional expression must be taken together. Separation must prejudice the course of the illness and the prognosis. For illness may be looked at in different ways. Some may consider it a physiological response to mechanical, chemical or infective stimuli from without. Others see disease as a total response of the organism, dynamic, purposive, meaningful, revealing all the distress in every possible manner, to the world but not to the sufferer. The evaluation of a patient's symptoms, then, will depend on the doctor's own concept and attitude to illness; whether his belief is purely of physical, biochemical, electrical and material changes or whether he asks himself, "What is this man trying so hard to tell me?", "What can his illness mean?"

Although we all accept a voluntary and involuntary nervous system, not all concur on the concept of mind or its division into conscious and unconscious. The interaction of emotion and bodily function is accepted as normal in blushing with guilt or pallor with shock and tachycardia with anxiety. Fear, worry, anger, resentment, tension give rise to frequency, diarrhoea, vomiting, goose flesh, loss

of voice, overbreathing, holding one's breath, sighs of relief and happiness to a total feeling of well-being. The brain receives an impulse through receptor organs in skin, eyes and ears and a functional cellular chemical or structural change occurs, leading to secondary impulses in somatic structures and physiological changes in the organs. The process is reversible. The body organs return to normal physiological working when the stimulus is spent or removed.

### **Muscular changes**

Emotions are expressed through changes in the musculature of the body, the face, chest wall, spinal column, shoulder, diaphragm and viscera. In laughter there is a general increase of secretions, relaxation of arterioles and capillaries with reddening of the skin, sparkling eyes and postural changes, throwing the head back, shaking the shoulders and chest. In crying there is a general inhibition of muscular movement with lassitude, pallor, cold skin and sunken features. Actors are able to simulate voluntarily the physical changes of emotion and many trained and accustomed to hide their feelings may show no overt muscular changes even though emotionally they are acutely affected. If we do accept an unconscious mind, we must agree that emotions and tensions of which we are not aware may cause bodily changes, leading to habits and attitudes as a means of expression.

### **Thought and muscular reactions**

Attention is an active process, whereby a particular stimulus is selected and others, internal and external, are neglected. The more strongly we strive to see, to hear or understand the more attentive we are; conversely, the less attention focused on any one stimulus, the greater the range of attention, the more relaxed and passive we become. Interest implies that the attention is readily drawn to a stimulus; interest is latent attention, attention interest in action, and restriction of the fields of attention, concentration. Perception, the interpretation of sensory stimuli, is dependent on our ideas, mental images, experiences, desires, and we may perceive falsely or misinterpret a stimulus because of our emotional needs. There are, then, objective and subjective factors which cause a person to become attentive and bodily pain is a variety of such sensory experience.

Concentrated thought processes produce two main types of muscular reactions. Group 1 are people who, whenever they want to think, cease all motor activity. They stop walking or manual working and

can resume their motor activities only after completion of the intellectual act; attention is required wholly for the organ of thought. They utilize all their energy to facilitate attention, to overcome the unwanted extraneous and intrinsic resistances. Although movements are suspended, muscular innervation, as shown by the tone of the resting musculature, is increased. The picture of the thinker is of one expelling, the whole voluntary musculature tense supporting a heavy head.

Group 2 under the same conditions of concentrated thought, squander their muscular energies; they gesticulate, grimace, shift their seat or walk about; their activity facilitates canalization of thought into logical sequences, checking precipitate excessive phantasy. Muscle tone is increased due to this resistance in addition to the actual movements.

The degree of effort necessary for thought depends on our mental make up; the associated emotional stimulus of the problem as well as comprehension and unpleasant thought processes will create greater increases of muscular tone.

Flanders Dunbar (1954) quotes experiments by Allers and Sceminzky (1926) working on action currents produced in muscles in response to ideas of motion.

The action currents were led off from the arm and transformed into acoustic phenomena. The real making of a fist, the idea of a fist, the inner repetition of the sentence, "Now I am going to make a fist", produced respectively marked electrical phenomena, 46 positive and 14 negative results and 37 positive and 11 negative results. The observers became so familiar with the acoustic phenomena that the observer was able to dictate directly, "Now the subject has been thinking of making a fist" and called the experiment "electric mind reading".

Hoagland (1928) in studies of animal hypnosis found two modes of reaction to stimuli; appropriate motor adjustments (attack, retreat, manipulation) and the often neglected mechanism, cessation of all movements.

### Posture

Posture is a complex series of attitudes of different parts of the body, whereby certain muscles acquire increase of tone in preference to others. It is static activity. The importance of the head, labyrinth and the neck are known through effects of disease and experimentally from decerebrate rigidity and removal of the cerebellum.

Minor exaggerations of normal posture indicate to us intuitively the prevailing emotional attitude. The bent head, the furrowed brow, the drooping shoulders indicate the depressive looking inward

with poverty of thought. The stiff overerect carriage of the vain, the head held high of the proud, cringing bowing deferential attitudes are well recognized. The picture of indecision, adduction of shoulders, tense muscles flexed, with the forefinger guarding the lips. The thinker supports his head as if overactivity of his mind increases the weight on his shoulders and extra support is required. One man reclines easily, relaxedly in his chair, his shoulders comfortably supported. Another sits forward uncomfortably on the edge of the seat. Some people take great strides expressing their restlessness and those with slow short steps are in no hurry to find or meet their future. When we become attentive, when we want to keep our head and mind clear and free from interference, we hold our breath. When we wish to relax a slowing down of activity and respiration leads to tiredness and sleep. Single forced or repeated expirations accompany annoyance or ironic smiling. Surprise causes a short forced indrawing of breath, Oh!, delight the longer OOh! with enlargement of the thorax and raising of the shoulders. Short forced inspirations with rapid forced expirations occur in anger; in relief of strain prolonged forced expiration with automatic wiping of the forehead, Phoo! Latent rage or latent anxiety, when neither rage nor anxiety is felt, but there is readiness to react with exaggerated rage or anxiety to stimuli that would create or provoke slight anxiety such as "kicking the cat". If a person feels ashamed he looks away or hides his eyes with his hands—"No one is to look at me, nor can I look anyone in the face". The face not only receives most first impressions from the outside world, but is the first part of the body which arouses unconscious reactions in others.

We understand the perplexity of people when we see them scratch the back of their head or chew the end of a pencil, or anticipate their being at ease if their hands are in their pockets. A sudden disdainful tilt of the head, the aggressive thrusting outwards of the chin, the interested glance sneaking over the shoulder, are as expressive as the derisive poking out of a tongue. The knitting of brows, the clenching of a fist, the quaking of knees, the clamping of jaws, the biting of lips, the slapping of knees are more indicative of change of mood than the interpretation of character of the high brow, the weak chin, the sensual lips or sensitive nostrils. The furtiveness of movements, a self-retirement in positioning, sudden staring or holding back are as indicative of emotional attitude as interpreting another's lack of interest in disinterested examination of the finger nails. When two people talking like each other, they incline toward

each other. If sitting side by side, they throw the stress of their weight on the near legs of their chairs. If we do accept an unconscious mind, we must see that emotions and tensions of which we are not aware may cause bodily changes, leading to habits and attitudes as a means of expression. "The regular parallelism of motor innervations with the psychic acts of thinking and attention, their mutual conditioning and frequently demonstrable quantitative reciprocity speak at any rate for an essential similarity in these processes" (Ferenczi, 1926).

Physiognomy, the assessment of personality from outward appearances, is an ancient art. Aristotle's work, *Displaying the secrets of nature, relating to physiognomy*, describes

an ingenious science or knowledge of nature, by which the inclinations and dispositions of every creature are understood, and because some of the members are uncompounded and entire of themselves, as the tongue, the heart and some of a mixed nature, as the eyes, the nose and others, we therefore say that there are signs which agree and live together, which inform a wise man how to make his judgment before he be too rash to deliver it to the world—and the dispositions, vices, virtues and fatality are plainly foretold.

He dealt with different types of hair and eyebrows, the shape of the nose, mouth, lips and ears, stature, configuration, of crooked and deformed persons, of gait and length of stride. He also ascribed that the man who looked like a fox must be sly. One who paled easily was a coward and facial expressions conveyed anger, resentment or lust.

The early division of temperaments into the melancholic poet, the choleric fighter, the sluggish overfed and the phlegmatic, shallow, optimistic sanguine, depended on assessment of facial expression, bone structure and muscularity. Kretschmer (1921) found in hospital patients that elongated frail asthenic people tended to dementia praecox and short rounded pyknic physiques were frequent among manic depressives. Lavater (1741–1801) expressed the hypothesis that all features of the body are ultimately congruent and consistent. Their forms of expression all proceed from a central, unified personality and therefore must be harmonious among themselves and must all betray the organization of personality within. Everything in man is progressive, everything is congenial. Form, stature, complexion, hair, skin, veins, nerves, bones, voice, walk, manner, style, passion, love, hatred; one and the same spirit is manifest in all (Allport, 1937).

The Bible, poetry, folklore, everyday idiom and what has been termed 'organ language' (Freud, Adler, Groddeck, Crookshank)

recognize the corollation of personality, tension and the musculature.

'Stiff-necked', like the animal that obstinately refuses the yoke. "A sound heart is the life of the flesh but envy the rottenness of the bones". "Heaviness in the heart of man maketh it stoop", "bowed down heavily as one that mourneth for his mother", "lifteth up his heel", "I will lift up mine eyes", "the right arm" and the "out-stretched hand".

From Shakespeare's *Julius Caesar*, I, ii, 192:

Let me have men about me that are fat;  
Sleek-headed men, and such as sleep o' nights:  
Yond Cassius has a lean and hungry look;  
He thinks too much: such men are dangerous.

We describe people as thin lipped, tight lips, poker faced, tough, down in the mouth, head-held-high, head-hung-down, turn up one's nose, jaw stuck out. To cold shoulder, shoulder the burden, broad shoulders and square. To make a clean breast, to open one's heart, heartache, gripping at the heart, something to be got off the chest, one's heart in one's boots. Spineless, no backbone, on his hands and knees, to fall, to slip, on his toes, weak kneed, hard, soft, flabby, limp. Gnawing at the vitals, paralysed with fright, rooted, staggered, froze in his tracks, tight as a drum, ready to burst, a beaten up feeling, hand shake, thumbs up, thumbs down.

These words and phrases indicate the everyday recognition and linkage of emotion with muscle set and spasm and emotional disturbance with changes in the voluntary musculature.

### **Disorders of thought and muscular activity**

In psychological illness the facial expression, the bodily movements and the stream of talk may show variations from generalized total overactivity to complete immobility. The physiology, the posture, muscular inhibition or manipulation are utilized and recognized as signs of thought disorder.

In states of mania, overactivity, with acts, rarely carried out successfully or completely, occurs in the presence of exaltation and flights of ideas. The increase of self-esteem, the deficiency of conscience makes the festival of the manic hungry for love objects. The disappearance of the psychic conflict of ego and superego releases energy previously held tied in their antagonism. Muscular activity occurs in the search and drive for ultimate satisfaction, the apparently purposeful yet playful nature of activity, are indicative of the release and sense of freedom felt. "I love everyone—every-

one loves me, especially myself" can, however, change rapidly into aggressivity with the slightest frustration. The release of inner tension facilitates muscular hyperactivity.

In contradistinction, the depressive with poverty of thought exhibits slowing and inhibition of physical activity. The depressive says, "Nobody loves me, I hate myself, I am unworthy and cannot reach out, nor be reached by anyone". The self-hatred of this guilt psychosis, the discord between ego and superego seen to the extreme in depression occurs to some degree with all states of bad conscience. The avoidance of others, the slowing of actions, a feeling of coldness and desire to shrivel up is shown in the tightening up of musculature, the flexion of body, the hunching of shoulders and knitting of brows. Inner tensions express themselves as external muscular rigidity.

Repetitive muscular activity, unchanging and apparently inappropriate and meaningless, is shown in the stereotype of attitude, movement and speech of the schizophrenic. The patient experiences his own acts passively as if he were a puppet. The movements occur in the absence of emotion, as if they represent the residuum of affect yet remain separate from the total personality. In the withdrawal of the patient from the outside world, he is no longer capable of complete emotions and effects a compromise by his stereotypy. An attempt at expression of emotion towards objects yet a suppression for fear of rejection, an annulment of expression. Jung (1909) saw stereotypy as sickly, disease, ineffectual attempts to recapture contacts and relationships, alluding to the conflicts of emotions to individuals, but also the inability of expression and the motor activity is the "emotional remainder".

*Flexibilitas cerea*, the maintenance of imposed postures occurs in the absence of both voluntary attention and feeling. The patient behaves as the neonate who is put down in a certain posture. Automatic obedience in echopraxia and echolalia, the repetition of actions and orders heard, imply a miming by the infant of the adult. They indicate attempts to regain contact, to identify and to show love.

Catatonic muscular rigidity is the symptom of the struggle to find contact with the outside world and the defence against it; the alternation of activity and inhibition leads to a tetanic response. The schizophrenic regresses to a level which the normal person experiences in his dreams. His unconscious operates freely, utilizing mechanisms of symbolism, dramatization, condensation, displacement and distur-

tion. Negativism, implying responses the opposite of those demanded, indicate hostility. The child when asked to open its mouth clenches its teeth.

In 1893 Freud postulated the conversion of psychic into motor excitement in hysteria. The psychic experiences were unpleasant to discuss, were not apparently remembered and there was no conception of a causal connection between the exciting cause and the pathological phenomena (Freud and Breuer, 1893). Motor disturbances vary from mild cramp to disabling paralysis, tremors, fits and seizures. In paralysis the distribution is functional rather than anatomical. Globus hystericus, aphonia, stammering, vaginismus, pseudo-angina, phantom pregnancy are some of the motor disturbances. The pain experienced is the unconscious self-punishment preferred to mental anguish. The conversion is an action which has gone astray and a compromise result. The impulse is not completely denied, yet there is distortion of aim and the object of the instinct is denied and changed. The instinctual drive turns away from reality, finding gratification by substitutes in phantasy.

The obsessional in his ruminations substitutes thought for action. He imagines himself attacking another with a knife and suffers guilt for his contemplated actions. Obsessive compulsive actions, the constant washing of hands or walls, replace the original purpose of the action. Minute gestures are carried out, the apposition of fingers, the finger on the lip, the touching of the ear lobe or external objects. The ritualist may use the whole of his musculature in his efforts to get to bed, the arrangement of his bed clothes or mode of undressing. Any upset of the proper order or doubt as to the correctness of a part of the action may necessitate a complete repetition of the process. There appears to be a series of alternating actions as well as increasing complications of the original obsessive act. The doing of a something leads to an opposite act, its undoing. In hysteria compromise ends in a monophasic symptom; in obsessionals, the repressing and repressed are both represented. This separation of thought and action of the obsessional leads to a physical rigidity characterized by retentiveness and unpreparedness for action. Thought processes are isolated from emotion and therefore physical expression. His touching impulses replace taboos; hand washing rituals, fear of symbolic dirt and compulsions of gait, inhibitions of walking; a condensation of instinctive drives and opposing forces. In hysterical conversion the ego is powerless and taken over; unintended actions occur. In obsessionals the ego does not feel free to govern its own

motility. It has to do things contrary to its own judgment or suffer dire threats. To do or not to do, leads to a dystonia and uncompromising rigidity. The catatonic's struggle differs also from the hysteric. The schizophrenic attempts to form outside relationships and struggles with himself; the hysteric struggles against his external relationships. The regression of the schizophrenic means giving up external objects and utilizing this energy of love and aggression towards the self. The reaction is total without the compromise formation characteristic of the neurotic and leads back to archaic functions and primitive prelogical magical thinking.

Tics are activities of groups of muscles, definite, abrupt, involuntary, apparently purposeless and habitually repetitive. Jerking of the shoulders, arms or legs, swallowing, clearing the throat, coughing, shaking the head, nodding, pouting, grimacing, winking or blinking are the commonest. They occur separately, alternately or together. They disappear during sleep, but can be inhibited voluntarily for short periods only. The tic is an allowable portion of a whole action; either the repressed situation of instinctual temptation or the punishment of hidden impulses. The infant gathers with all its senses the mood of the adult and mimes some part of the adult's muscular movement as its own interpretation of the prevailing mood. The use of the musculature for immediate discharge rather than for directed action is a symptom of an intolerance for tension and waiting in the infant. Once an emotion becomes associated with a particular and peculiar physical attitude the attitude may in later life be used as an expression of the emotion itself.

In anxiety hysteria, the somatic symptoms may involve various bodily systems; cardiovascular, respiratory, gastro-intestinal, secretory, cutaneous or muscular. The voluntary musculature is concerned with breathlessness, overbreathing, tremors, twitchings of muscles, weakness of limbs and fatigue. From the raising of eyebrows in mild apprehension to flights of panic, whenever the sympathetic nervous system prepares for fight or flight muscle is involved. For the purposive movements of limbs both aggressive and defensive or in maintenance or operation of posture; in the enclosing of the body cavities and their varying sizes and in the serving of sensory organs and their specific actions, the facial expressions, mastication, swallowing, speech and respiration, the musculature is utilized with increases of physical tension.

The patient reacts to an unconscious danger from within as if it were from without. Displaced and projected from the true danger,

it finds symbolic expression in external phobias. A rise of instinctual tension, unrelieved, associated with anticipation of retribution if efforts are made to relieve the build up leads to a return of infantile helplessness and feelings of fear of bodily harm. This inhibition of psychological decision reflects in the blocking of movements and therefore increased tension in the voluntary musculature. Muscular spasm aids repression, producing the tiring fatigue characteristic of psychogenic illness.

Fenichel (1946), stated

Every disease is psychosomatic; for no 'somatic' disease is entirely free from 'psychic' influence—an accident may have occurred for psychogenic reasons, and not only the resistance against infection but all vital functions are continually influenced by the emotional state of the organism—and even the most 'psychic' conversion may be based on a purely 'somatic' compliance. Functional changes due to 'toxic' influences, that is, to changes of the chemistry of the unsatisfied and dammed up person, are not necessarily identical with change caused by an unconscious use of these functions for instinctual purposes. Thus four classes of organ neurotic symptoms have to be distinguished: (1) affect equivalents; (2) results of changes in the chemistry of the unsatisfied and dammed up person (expressions of 'unconscious affects'); (3) physical results of unconscious attitudes or unconsciously determined behaviour patterns; (4) all kinds of combinations of these three possibilities.

### Summary

In the aetiology of rheumatism an analogy exists with the common cold, the catarrhal child, where research into family infections, dietary habits, social and economic factors, overcrowding, maternal care, dampness of the house, clothing and relationship to climatic conditions have failed to elicit a causal relationship.

All that is certain in rheumatism is that the patient complains of a variety of sensory experience, that is, pain, located in the soft tissues of the body. Muscular pain is caused through increases of muscle tension. The physical secondary effects of such increased tension, that is, mechanical defects and degenerative processes, are the conditions at which research has unfortunately always been directed. The primary cause is neglected.

Muscular movement is not only voluntary but also automatic when utilized in the expression of emotions. The face, chest wall, spinal column, shoulder, diaphragm, show movement and changes. In laughter there is a throwing back of the head, shaking of the shoulders and chest. In crying there is a general inhibition of movement.

Posture, static motor activity, indicates the prevailing emotional attitude of the individual. The attitudes of shame, indecision,

vanity, depression, perplexity, aggression, are easily recognized. Emotions and tensions of which we are aware produce bodily changes. Latent aggression or anxiety create a readiness to respond excessively to stimuli that would normally produce only mild similar reactions, 'kicking the cat'.

Unconscious utilization of muscle occurs in all psychogenic illness. As long ago as 1893, Freud postulated the conversion of psychic into motor excitement, in hysteria. The psychic experiences were unpleasant to discuss, were not apparently remembered and there was no conception of a causal connection between the exciting cause and the pathological phenomena. Motor disturbances vary from mild cramp to disabling paralyses, tremors, fits and seizures. The pain experienced is the unconscious self-punishment and the result of compromise; distortion of the aim and denial of the object of instinct.

The obsessional in his ruminations substitutes thought for action, his touching impulses replace taboos, hand washing rituals, fear of symbolic dirt and compulsions of gait, inhibitions of walking. In all a condensation of instinctive drives and their opposing forces create a mental and physical rigidity.

Tics are activities of groups of muscles, definite, abrupt, involuntary, apparently purposeless and habitually repetitive. The use of the musculature for immediate discharge rather than for directed action is a symptom of an intolerance for tension and waiting in the infant. Once an emotion becomes associated with a particular and peculiar physical attitude, the attitude may in later life be used as an expression of the emotion itself.

In the very common anxiety hysteria, the somatic symptoms may involve the musculature in disorders of breathing, tremors, twitchings of muscles, weakness of limbs and fatigue. From the raising of eyebrows in mild apprehension to flights of panic, whenever the sympathetic nervous system prepares for fight or flight, muscle is involved.

In the manic depressives, overactivity in the presence of exaltation and flight of ideas occurs with acts carried out only partially successful or complete. In depressives there is inhibition of movement related to poverty of thought. The schizophrenic shows repetitive muscular activity, unchanging and apparently inappropriate and meaningless in stereotypy of attitude and movement. Flexibilitas cerea, the maintenance of imposed postures, occurs in the absence of both voluntary attention and feeling. The patient behaves as the neonate put down to rest. Echopraxia implies a miming of the infant

of the adult. Catatonic muscular rigidity is a tetanic response of the struggle to find contact with the outside world and the defences against this.

There appears, then, to be some reciprocity of muscular innervation with thinking and attention, an ability for conversion of psychic to motor and motor to psychic energy and disorders of thought are freely expressed as a miming, prelogical, magical language in the musculature. What cannot be verbalized must be symbolized, to find expression.

In general practice it can be noticed that if the main symptoms of pain and limitation of movement are noted and the patient is allowed, encouraged and given time to speak freely, inevitable concomitant ailments are invariably tiredness, listlessness, fatigue, irritability, lack of appetite, anxiety, insomnia and depression. These symptoms are usually accepted as resulting from the physical effects and limitations imposed on the sufferer and never evaluated in their own right. The man has pain, cannot work and therefore should be depressed, anxious and apprehensive for the future. But true diagnosis must take into consideration all symptoms. Words and emotional expression must be taken together. Separation must prejudice the course of the illness and the prognosis. The acceptance of the physical symptoms and neglect of the emotional leads to the use of rubefacients, analgesics, steroids, injections, massage, baths, hydrotherapy, physiotherapy, breathing exercises, diets, pilgrimages, cruises and flights, bee stings and urea, each of little more value than simple reassurance and waiting for spontaneous remission.

The taking up of physical and psychological symptoms together, however, with the knowledge of symbolism reveals that the pain in the arm may be the desire to strike out or the illicit use in stealing; the pain in the knee, anger, aggression or anxiety to the child; the lumbosacral pain in a young woman, reluctance for intercourse or fear of pregnancy; headache leads to pain in the breast and torticollis that one is ashamed and wants to avoid and look away, and a pain in the neck comes because of ambivalence to someone who is a pain in the neck.

The infant cries with massive muscle contractions when dissatisfied. The overconscientious child has spasm of his recti muscles each Monday morning when due for school. The growing pains of the prepubertal child located in the thighs is associated with his emotional development and tensions in the family circle. The muscular pains of the menstrual period in the adolescent girl, in

back, pelvis and thigh has phasic occurrence and disappearance. All of these occur, irrespective of temperature, barometric pressure or moisture saturation or virus infection.

Ventilation of the problem and psychotherapeutic interpretation lead to relief of the muscular tension. Only then will supportive physical treatments help to remove the physical secondary effects of the tension.

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**The Family Doctor and the Family Nurse.** G. SWIFT and I. A. MACDOUGALL. *Brit. med. J.* 1964. **1**, 1697.

This article describes a Hampshire scheme whereby nurses, midwives and health visitors are attached to work exclusively with family doctors. A family doctor (G.S.) writes on the day-to-day working of the scheme, while a medical officer of health (I.A.MacD.) fills in the administrative background.

There are now over 100 nurses, midwives and health visitors working with about 150 family doctors in Hampshire alone, and the authors conclude that such attachment schemes are "the greatest single contribution that can be made to enable the family doctor to give comprehensive medical care . . . The Hampshire County Council accepts that for a far better medical service it is well content to meet the additional cost".