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Bernard McGhie needs no memorial lecture to keep alive his memory. The man he was; the things he did and the benefits he fought for, and gained for those who are sick and afflicted in body and mind will live and will be remembered long after any words I speak have been forgotten.

I am honoured at having been selected as your lecturer. And now with satisfaction and pleasure, I give you the First B. T. McGhie Memorial Lecture.

I WOULD like to present to you a series of verbal sketches. I believe they fit together and when I have finished there will be the completed picture of my theme.

My first sketches are contrasts drawn from my war experiences in the United States and various parts of the world as Consultant to the Army, the Navy, and the Air Forces.

War is the great leveller. Roughly, it strips the soft, protective swathings of civilian life from millions of young men and exposes them naked to a gross threat to survival. The rigors of war focus upon men a bright and questing light, illuminating strengths, but also pitilessly revealing weaknesses, physical and mental. Frequently the scales of war are heavily weighted against the chances of physical and emotional survival; sometimes even against the wish to survive. Often, the last ounce of bodily strength and more than that, everything a man was, is, and hopes to be, must be thrown into the balances before they tilt in his favour.

During the past three years, two sharply contrasting pictures have been etched deeply upon my mind. One picture I saw in many seriously wounded youngsters, notably in the amputees, in many overseas hospitals; at Long Island’s Mitchel Field; at San Diego and in every army
and navy medical facility to which battle casualties were brought by ship and plane. It is an unforgettable picture painted with the shining pigments of faith, gallantry and unsullied morale.

In the first hospital station in the continental limits to which wounded soldiers are brought from overseas, there is a bedside arrangement by which a 'phone may be plugged in and the soldiers may call their homes. The first time I overheard snatches of these conversations, tears came into my eyes. I hope I may never lose the feeling of reverence I experienced whenever I heard these youngsters talking to their mothers and their families, making light of the loss of an arm or a leg. A group of Navy nurses who attended a trans-continental train-load of amputees spoke of the journey as the happiest war experience they had. One eighteen year old sailor would "anxiously" beckon a nurse and confide to her his "deep concern" as to whether the artificial leg he was going to get in Philadelphia would have a compartment in it in which he might conceal a bottle of beer.

To this picture, too, there belong many psychiatric battle casualties like true "combat fatigue". Here in the catastrophic nightmares, the stark horror of devastating war experiences is relived again, seeing, not merely remembering, but seeing his closest friend, a fellow gunner on a battle plane, suddenly slump in death at his side; his "buddy" slogging along beside him on a South Pacific island or a Normandy beachhead, alive and strong and then bathed in the blood and sweat of death; his friends clinging to a life raft decimated by the merciless raking fire of the enemy; the soul agony of being trapped in the boiler compartment of a torpedoed and sinking ship. Small wonder that even months after the actual experiences, when awakened from the nightmares, these men grasp at any outstretched hand, clinging to it like terrorized children.

The contrast was neither cheerful nor inspiring. By the tens of thousands there were the vague manifestations of the so-called psycho-neuroses. Backaches by the scores, for which meticulous and exhaustive examinations failed to uncover any bodily reason; headaches, infinite in variety but unexplainable on the basis of physical disturbances of the brain, spinal cord, peripheral nerves or any of the organs or tissues of the body. Then there was a large area of just plain "tiredness" or "don't feel right" and many other complaints. Discouragingly, after much reassurance and encouragement and all kinds of treatment, there was little or no response: "Well, maybe my back is a little better, but if I stoop over, it hurts just as much"; "my head is just as bad as ever"; "if I rest I'm alright, but if I try to do anything, I feel all worn out". It was like trying to push back a wall of water. There was nothing solid to get hold of.
MOTHERHOOD AND MOMISM—EFFECT ON THE NATION

Of course, there were exceptions, but a considerable segment of the many thousands of young Americans discharged with the diagnosis of "Psychoneurosis" or its equivalent and many more of the 200,000 let out with other discharge labels but corresponding to the psychoneurotic picture, fall into this group. Almost 40 percent of all medical discharges were neuropsychiatric. They gravitated into this group within a few months and often within only a few weeks or days of induction. At first, they constituted about four-fifths of the entire NP case load. Of course, they had never been outside the continental limits.

A few months before "D" day, I had the privilege of conferring with Generals Eisenhower, Spaatz, Doolittle; Admirals Stark, Kirk and others, including our great Canadian and British military leaders in ETO. Their quiet, grave confidence concerning the approaching invasion was inspired and justified by the morale of the men who were training to breach the Nazi citadel of Europe. Remembrance thrills at the sight of many thousands of young Americans in ETO, energetically and enthusiastically preparing for "D" day; eagerly and impatiently awaiting its dawning.

There is a sad contrast and Psychiatry warns the nation not to forget it. More than 1,825,000 young men, upwards of 40 percent of the total of rejections for all causes, were rejected at induction for various neuropsychiatric causes, mainly for "psychoneuroses." In the huge segment of this larger group, oddly assorted neurotic symptoms and often a record of psychopathic behavior only faintly camouflaged the lack of motivation.

It was several months past "D" day. After having accumulated considerable fire and body strength, the enemy was on the march, into the bulge. It was his final bid for power. American positions were threatened; American lives were in grave danger. But, 40 combat divisions in reserve were rushed into action. Our positions were successfully defended; the lives of our boys were spared. A glorious climax, but there was an anti-climax. Many American positions were lost and many young American soldiers did pass through the portals of death. The reserve divisions were "ghost" divisions. They did not come up to the battle line. They could not. They were the 495,000 young men, enough to man 40 combat divisions, who evaded enrolment into military service, not hesitating to resort to any device, however shameful, even to the wearing of female clothing, pretending to be women. It should be emphasized that these "draft dodgers" did not claim to be conscientious objectors. They did not take even that small risk of induction.

Fortunately, it is not necessary to becloud the issue by attempting to answer the question: which of these classes and which men in these classes were sick? They were all sick, those who behaved nobly and those whose conduct was base. Those psychiatric battle casualties who
served splendidly and broke only after an overload of physical strain and emotional stress beyond the limits of average human endurance, were sick. Those men, too, were sick who made a feeble bid of service but soon after induction, sometimes only a few days, retreated under the cloak of neurotic symptoms. Likewise, were those men sick who failed to clear the induction hurdle because they were weighted by "psychoneurotic" impediments, often directly traceable to serious deficits in motivation; or their previous behavior records were bad enough to make them unacceptable. Finally, even the least of them were sick, too, those who did not make even the gesture of service—the "draft dodgers."

In the solution of any human emotional conflict, the compromise which is arrived at depends not only, or even chiefly, on the nature and gravity of the problem but on the strength of the contending forces engaged in the inner psychic battle. We cannot bring more into the struggle than we have. We are as we are. Therefore, not only were all these men sick, but the symptoms of the sickness, represented in each man the only possible compromise of a serious emotional conflict common to all: self-preservation vs. "soldierly ideals." The conflict was a silent, grim, unconscious struggle between, on the one side the respective and numerous behavior demands of our most ancient biological endowment, innate not only in man but in all forms of life—self-preservation. So insistent and so dominant is self-preservation that it operates automatically, not only in attempting to remove us from the path of danger to life, but it even strives to protect us from life's trivial discomforts. On the other side, strongly opposing this, and engaging in psychological combat with it, is a constellation of behavior patterns, which in this instance can be labeled "soldierly ideals." Even at rumours of war, there comes into the mind of every man who might be called into military service, thoughts of the expectations and requirements that go with being a soldier. In the army, these expectations and requirements are made clear and strengthened by regimentation and discipline. "Soldierly ideals" consist of instilled behavior patterns which are numerous and complex. Included are such realistic segments as the fear of being shot to death for cowardice in battle; practical considerations, like the desire to finish "this dirty job and get home as soon as possible"; more idealistic drives, "this is my duty and I am going to do it right". Various high levels may be attained and sometimes such summits as the determination to fight for and if need be to die for the preservation of human democracy, are reached.

While the conflict is the same in both groups, yet, the manner in which it is fought out is vastly different. In those who "took it", the available motivation and determination which was exerted, in other words, the amount of effort expended, in attempting to control and inhibit behavior dictated by the demands of self-preservation, constantly
cautioning against undue hazard to life, was at a very high level. In the others, those who could not “take it”, the struggle was weak and ineffectual, and control and inhibition were at the vanishing point. Self-preservation ran amuck.

On the other hand, here were the epics of human behavior under crushing physical and emotional blows. In the records of the war they are so common that it would be trite to repeat them, were it not for the fact that epical human conduct can never be trite; nor can it be recounted too often. Exhausted marines in jungles infested by disease and worse by the ghostly, taunting voices of the enemy, monotonously incanting “God damn American sons-a-bitches”; men at sea clinging to rafts straffed by enemy fire watching, as one by one, their buddies relinquished their hold and sank into the sea; men in submarines shaken by the concussion of a depth charge, knowing the next explosion might be for them the messenger of death; men in bombers, their friends, the friendship annealed by the sharing of many dangers, bleeding to death from mortal wounds; flyers brought down in enemy territory, injured and alone with every hand against them; paratroopers hiding out behind enemy lines; men in flat-tops impotent against mad, destructive dive-bombing; the slogging, fighting, weary cadence of the march of the infantry, through rain, snow and mud, day in and day out; long, monotonous, but withal, dangerous operations in convoy of ship and plane; the men who wrote in never-to-be forgotten characters of blood and suffering the glorious achievement of the saving of the flat-top Franklin; the death marchers of Bataan. Small wonder, that in some of these heroes the resistance defences finally were breached and psychoneurotic symptoms appeared.

What of the 80 precent of the psychoneurotics? Look at the many young men, far too many, in army training areas and navy “boot” camps a few weeks after induction. True enough, they were separated from their homes, but usually they were within writing, telephonic and even visiting distances. Likewise true, the beds were less comfortable and the food less attractively served than at home. In field training there were “K” rations, doubtless containing the requisite number of vitamins but hardly satisfactory for the composition of a tasty meal. It was necessary to get up quite early in the morning and sometimes it was cold. The sergeant or the petty officer may have been a “tough guy.” Some of their fellow soldiers were rough and boisterous, given to “kidding” and playing practical jokes. One psychoneurotic discharge complained to me that the other soldiers did not “smell nice”. There was considerable monotonous drilling and certain unpleasant duty details like KP and there were fatiguing manoeuvres. There was much preparation and conditioning for combat and the atmosphere was heavily charged with anticipated dangers.
Frequently, far too frequently, such "hardships" were sufficient to break through the weak walls of motivation in many thousands of young Americans, erasing the last vestige of the will to serve, leveling the last barrier against the freeing of behavior, activated by self-preservation and setting into motion those mental mechanisms which eventuated in the shaping and exhibition of indefinite but "face saving" psychoneurotic symptoms.

Not all by any means, but far too many of these psychoneuroses were not like civilian ones but vague, ill-defined, closely connected with lack of motivation for service.

The raison d'être for the breakdowns in those men who served well was not difficult to find. Even sound and adjusted personalities may be disrupted by the overwhelming precipitating factors commonly found in the conditions of modern war on land, sea and in the air, with the tremendous hazards and strains and devastating emotional experiences.

Neither was it difficult, in my opinion, to find reasons, even basic ones in those who did not and could not serve. Often it was merely necessary to retrace their lives a decade beyond their current ages. Given the opportunity of having known these young men of 18 to 22 when they were 8 to 12 years old and particularly having known their mothers, a competent psychiatrist could have forecast with reasonable accuracy their future military ineffectiveness. Certain grave deficits in early childhood training to which the current neuropsychiatric disabilities were reducible could have been discovered at an early age.

Now, I am on perilous terrain, because in the interests of democratic strivings, I am about to indict a considerable number of mothers, constituting a time honored and revered national institution, popularly and collectively known as "MOM." Among other things, mom is a boon to advertisers of commercial products from breakfast foods to bathroom fixtures. Incidentally, mom is the most powerful vote-getting lobby in political life.

Without any thought of turning away the wrath, I am about to incur, I would like to record that obviously there were more sensible, straight-thinking psychologically "good" mothers than there were confused, selfish and psychologically "bad" mothers. Had it been otherwise, instead of having achieved a glorious victory over our enemies, we would now be facing the prospect of disastrous defeat.

I apologize for using the word "mom" to describe the woman who defaults the second part of the dual function of motherhood, namely, the loosening of those emotional bonds which bind the child to the mother; the woman who refuses to emancipate the child. I have nothing against the word "mom," although I do happen to prefer "mother." I had to use some word. I could not call the woman who withholds from
her children emotional freedom and maturity—"X". After all, this is not an equation in algebra. It is the exposure of a gigantic and cruel hoax, too often practised upon children. However, let it be clearly understood that when men and women, as many do, affectionately call the mother who has borne them, loved and protected them when they were weak and helpless, aided them to grow up not only physically but even more significantly emotionally, inculcated into their personalities decision and maturity, all the time gradually untying the emotional bond; when they call such a woman "mom" then it is a beautiful and honourable word.

I now sketch for you briefly one of the oldest dilemmas in the world—"The Dilemma of the Mother."

Every woman who bears children is confronted by a dilemma from which there is no escape. The dilemma is as old as the human race. While the dilemma is ancient, its implications and its dangers are peculiarly a part of our closely knit modern civilization and its intricate social cultures. Upon the relatively successful solution of the problem by mothers, depends not only the welfare of their children but the very survival of the nation of which children are citizens-to-be. The solution is not easy, and the stakes are very high. No nation in the world is in greater danger of failing to solve the mother-child dilemma than our two nations, and no nations would have to pay as great a penalty for the failure to solve it than the United States and Canada.

The future social behavior of the child has its origin and is irrevocably patterned in the conflicting sensations and emotions arising from the mother-child relationship. For the child, the mother is not only the lavish dispenser of pleasure and love and the great protectress, but also the source of pain, the ruthless thwarter and frustrator. So the dilemma of the mother is likewise the dilemma of the child. In this delicately balanced ambivalent "give and take" interaction between clinging and rejecting, there is acquired an innate capacity to meet successfully the larger "give and take" of grown-up individual and social living; or else this capacity is not developed. If it is not, there will be a failure of adjustment to self and to society. *The child never grows up.* If the number of mothers who do not give their children the basis for such subsequent adjustment is unchecked and continues to increase, our democracy-seeking will end by being impaled upon the child-possessive-love horn of the mother's dilemma. For democracy cannot be only a matter of taking. Unless there is an equal measure of giving, democracy is doomed to perish.

Now, again apologizing for the word "mom" I may give you a definitive sketch of a mom.

She is a maternal parent who disregards the second part of the
dual function of motherhood. Weaning is as much a part of the maternal function as is nursing; taking away from the child is as important as giving to it; rejecting or emancipating the child is as significant as clinging to it. These seemingly contradictory functions of motherhood belong to each other both in nature and sequence. A play would be incomplete and meaningless if it stopped at the end of the first act or if the last act were given without the first. The phase of taking away or the "rejection" of the child by the mother would be not only ineffective but would be senseless cruelty unless it had been preceded by the clinging to or protective phase. On the other hand, the child who has known nothing but protection and has learned only to take, never to give, has been so badly defrauded by its mother that it would have been better if never born.

We have certain functions in common with animals and we have not disdained to bring some of them into our civilization without overmuch modification or adornment. We are still very close to the primitive, not only in the uncurbed display of stark emotions but also in the performance of many bodily functions. Socially, too, we have not progressed very far from the primitive. For instance, the major part of our time and the larger segment of our activities during the last 30 years have been devoted to the business of mass killing—war. In view of these facts, it would seem unfortunate that the moms have so completely disregarded a very necessary part of the maternal function, that is, teaching and helping the young to fend for themselves.

2. Mom is a maternal parent who fails to prepare her offspring emotionally for living on an adult social plane, who does not untie the silver cord, that emotional cord which binds her children to her like a band of steel.

3. Perhaps a mom may be climaxed by saying she is a maternal parent (sometimes it is the paternal parent) who prefers to keep her offspring feebly paddling around in a kind of psychological amniotic fluid, rather than permitting them to swim away from her with the increasingly bold and decisive strokes of young maturity.

Silver cords come in varying lengths. Sometimes they are short, mere tether ropes. Once, I heard two moms proudly boasting that their 16 and 17 year old children had never slept a single night away from their homes.

More often, silver cords are much longer, seemingly allowing for a wide range of freedom, but it is surprising how quickly they are drawn taut should the children roam near strange pastures.

I will now present briefly a few thumb nail sketches of some of the many moms I have observed.
There is a common, garden variety of mom who takes no end of trouble and spares herself no pains in selecting for her children well toward being grown up, their clothes and shoes; the cut of their hair; their companions; their sports and their social attitudes and opinions. By "selecting" I do not mean wise guidance but dominance, sometimes hard and arbitrary; more often soft, persuasive and somewhat devious. Less common, is the direct admonition—"I won't let you have that suit"; "Don't ever bring that rough boy, Jack, into this house again"; "I won't allow you to play football". More frequent is the method of indirection. In some way, the child is made to feel that mom is hurt, though it would appear that she is striving ever so bravely to conceal the hurt. The soft method is infinitely more successful in blocking manifestations of youthful independence of thinking and acting.

So, too, may adolescent opinions and attitudes be directed into the channels of "momistic" thinking, not by explanation, discussion or argument, but by questionable and camouflaged techniques. Whether they realize it or not, moms discourage self-attitudes and self-opinions not because they may be erroneous but because they are signal-flag behavior warnings that the son or daughter is growing up and beginning to switch away from the maternal track. This is why mom blights maturing thought and emotion. Even though she may not know why she does it, the disastrous result for the children is not mitigated by her ignorance.

There is a mom who when hard pressed may admit hesitatingly that perhaps she does look "done out" and maybe she is a bit tired, but she chirps brightly, "What of it?" She does not say so, but the inference is that she does not care how she looks or feels, for in her heart there is the joy of service. From dawn until late at night, she finds her happiness in doing for her children. The house belongs to them. It must be "just so"; the meals on the minute, hot and tempting. Food is available at all hours. No need to stop at "Tony's Diner" for a snack, for even if it is well after midnight, the opening of the house door is very likely to be the signal for mom's voice, calling sweetly: "Jack, there is some milk and a tray of sandwiches I fixed for you in the ice-box." No buttons missing from garments in this orderly house. Everything is in its proper place. Mom knows where it is. Uncomplainingly, gladly, she puts things where they belong after the children have strewn them about, here, there and everywhere. The service is almost continuous. The trail between the rooms of the house, down to the cellar, up to the attic, "just around the corner," is constantly and hurriedly traversed by mom's willing feet. Anything the children want or need mom will get it cheerfully for them. It is the perfect home. No wonder, then, even though she tries bravely to conceal it, mom is a "little hurt" if her kiddies, 12, 14, and 18 years old do not spend practically all their free
time in this perfect home. Of course, she would not voice it but deep down in her heart, she whispers: "where else can they find what I give them here?"

For the sons and daughters who passed from such conditions to life in an army or navy training camp or, for that matter, into the every­day "give and take" of civilian living, it was like stepping from a delightfully warm shower run for you by mom when you are in a hurry, into a bone-chilling cold mountain lake.

Then there is the mom who has given all her strength in bearing her children. Now in middle life she is pitifully frail, often "too weak to raise a finger". The doctor says there is no organic disease, "she just isn't very strong". Not that she ever speaks of it, yet, somehow even the neighbours know of her sadly spent condition. The children of such moms always know. Some of them know it bitterly and resentfully, but invariably there is at least one child, usually a daughter, sometimes a son, who knows it lovingly and pityingly. Around this child the silver cord is drawn taut. Why not? It is a life for a life—fair enough. After all, there should be great happiness in giving all for her who gave so unstintingly in bringing the child into the world and caring for it when it was helpless.

Psychiatrists know there is a catch. It is not a fair bargain. We have seen too many broken and frightened men and women, after the hand of death had taken away the invalid mom. It was too late for them to re-enter the lists of life. The silver cord had been drawn so taut that all other personal and social threads had snapped. Under the layer of the memory of love and self-sacrifice, there is a deep and dark well of lost opportunity which now is beginning to stir, threatening to flood into consciousness, carrying with it bitterness and hatred against the mom who broke them upon the wheel of her own selfish life.

Sometimes the silver cord softly knits together the family circle in complete "harmony" and happiness. Blessedly, arguments are checked and the hasty word is stilled in its utterance by the Pollyanna mom: "Hush, children, we love each other too much to quarrel." It is very beautiful, like a waxen flower contrived by a skilled craftsman. It is too beautiful—too artificial. The house is too much of a sanctuary from the rough contest of everyday life. Failing to find a comparable peaceful haven in the outside world, it is quite likely that one or more of the brood will remain in or return to this happy home, forever enwombed.

There is a mom, who no doubt activated by sincere, although sentimentally immature considerations, unerringly and usually deftly inserts herself as a protective barrier between the children, or more often, between one child and justly merited censure from the father or from the other children. The unfortunate victim of such solici
is doomed to find out that the personal and social conditions of adult life swiftly and casually nullify the emotional bond of protective security from deserved blame given in childhood.

Sometimes, the protective mom wages her defensive warfare openly. This may partake of all the qualities of melodrama, the “outraged” mother treading the summits of histrionic art with the limelight shining down upon her and her “innocent” child, incidentally magnifying his ego and diminishing his chances of growing up.

Much more pernicious than the melodrama is the silent pact between mom and her child. While the child is being punished, she pursues a policy of non-interference. The child knows all too well the lines of the last act of this familiar comedy. He will be gathered into mom’s arms, solaced and petted and given a largess of emotional and material rewards for having been so “brave”. Thus, gently and expertly, mom binds the child to herself with the silver cord. Each binding further diminishes the child’s chances of ever being able to free himself.

Neither in civilian life, in its business or other affairs, in family life, and in fact, in all personal and social relationships, nor in the army is it possible to go on very long without incurring censure. One may “slide out” of blame for a time but, to balance this moratorium, there comes to every human being a certain measure of unmerited blame. Unless the child has learned to face the consequences of his acts, then as an adult his ego will be frequently and badly bruised. He is likely to be crushed in his personality, or else this becomes twisted with distrust and suspicion.

There is a mom I think of as the “pretty addlepate”. She would be amusing if she did not do considerable damage. Certainly, she makes no conscious effort to bind her children to her side. Often she is away from them, bent on pleasure not strictly maternal. She is of the tribe of Narcissus. She follows an elaborate cult of beauty with lengthy rituals of clothing, cosmetics and perfumes, “hair-do’s,” dieting, massage, etc. She does achieve the result she strives for. She is pleasing to the eye and is very pleasing in the eyes of her children. When she bends over them before leaving for a party, all sweetness and grace and beauty, delicately perfumed, the children are entranced by the vision—“mother is so lovely and smells so sweet”. The odour comes in bottles and is not the mother odour. No harm in all this and it may even be commendable, but as far as the addlepate I have in mind goes, this is about all the children see of her. She is rarely visible, even to her own children, unless she looks and smells “just so”. For her children, at least the female children, the cult of beauty becomes a shrine at which to worship. A little girl I know bursts into hysterical weeping if there is even a remote suggestion that any other woman is as beautiful as her mother or any
little girl as pretty as she. For the sons, the ideal womanhood engraven on their personalities, is one in which physical pulchritude is the important component. A rose by any other name will never smell as sweet to them.

Of all moms, probably the cruelest is the one who closes the door of her children's lives against the vista of normal and wholesome sex and fastens it securely with her silver cord. Unconsciously revenging herself for the disappointments, frustrations and thwartings of her own sex life, ruthlessly she divests sex of all its beauty and makes it seem ugly and even loathsome. She may do this directly as she imparts "the facts of life" to her daughters and sometimes even to her sons. It would appear that men are lustful carnivora, prowling about the world seeking females to devour. "So few men are considerate in that way." "They don't care to what they subject a woman; how they break down her health as long as they have their pleasure." "A woman must be constantly on guard."

With her sons mom varies the theme: "Girls are different these days," the implication being that they are very different from the kind of girl mom was. Too few girls are sweet and modest. Deliberately and shamelessly they use their sex charms to trap unwary young men: "Before you know it, it is too late and you have wronged the nice girl you might want to marry some day."

Fair enough, but unfortunately, the "nice girl" is drawn to such meticulous specifications, that the chances of finding her are somewhat remote. Even should he find a girl resembling mom's blue-print how can he be sure? She may be one of those female werewolves mom warned him about.

I have sketched only a few of the moms I have known.

In any event, a considerable segment of the military ineffectiveness, whether due to neurotic symptoms or bad behavior was conditioned by the fact that in childhood, the boys had moms instead of mothers. It is fair and right to present every argument to the contrary. Many of these young men were not offenders against the code of ethics. They could not serve because of psychoneurotic manifestations. Perhaps they could not put themselves in a situation in which they would be expected to kill other human beings. The symptoms were determined unconsciously, that is, without the knowledge or consent of the patient. Let us assume that the symptoms appeared in order to save them from being forced to commit the legalized murder of war. I have frequently heard the objection that lack of stomach or motivation for war, an unwillingness to kill other human beings, does not indicate any shortcomings in social responsibility and responsiveness. Indeed, it is said that it is indicative of a nobler code of social ethics. Up to this point the argu-
ment is valid enough. However, I cannot agree with the conclusion that, therefore, those mothers who did not raise their boys to be soldiers and who conditioned the early training of their sons so that in one way or another, the danger of being fed into the maw of Mars would be avoided, were not immature, but actually were socially, culturally and ethically superior to ordinary mothers. The sons of ordinary mothers fight, kill and sometimes are killed in winning the battles of war. The superior mothers reserve their sons for higher and nobler purposes. If this were true, it would be a significant argument. By and large, it is not true.

In the majority of the men I have in mind, the low level of motivation and social responsibility was by no means confined to military service. In fact, it was not selective at all, but general—a valley of ineffectiveness, of taking without peaks of social giving. It might just as well have revealed itself in any need for community social service, fighting a forest fire; strengthening the flood banks of a river; shoveling the snow bottle-necking a highway. Even more tellingly does the ineffectiveness reveal itself in everyday living. The record reveals many behavior gaps and vacuums in these personalities. On the balances of personal, family, community and national life in the long section life history, "taking far outweighs giving"; so-called "rights" and "privileges" to be obtained far outnumber duties and obligations to be honoured.

Mom is a protean figure. Furthermore, she marches at the head of a long line of surrogates. Should she drop out of line, many are able and willing to take her place.

Sometimes and often, "Pop" is mom. When an emotionally immature man marries a mature woman, a very difficult situation is created.

The wife finds she has married a child-adult. For a time the situation may be intriguing but soon it beings to pall. Particularly is this true when children begin to arrive. They provide a much more satisfactory answer to the call of maternity, than does a big hulking fellow of 25 or 30 who always wants to be babied. A thoughtful observer once remarked that a successful wife should be wife, mistress, mother and child but the formula must not be too unevenly partitioned. Constantly rubbing his "poor tired back" and endlessly soothing his ruffled feelings, that is, being a mom is scarcely a substitute for the obverse of the three remaining ingredients in the formula, the contribution of the male to the marriage—the husband, the lover and the father. So the immature husband failing to find another mom in his wife may engage earnestly in the business of being a mom to his children. Possibly it is the only availing sop to his ego. For the wife who is trying sincerely to be a
genuine mother, having a mom for a husband poses a problem which can be solved only by increasing vigilance and thoughtful planning. The more firmly the wife-mother tries to anchor the children to the moorings of emotional and social stability, the harder the husband mom seems to strive to pull them away into the whirlpool of emotional and social instability. Even when the wife is strong and determined; the husband weak and wishy-washy and the children sense the situation, he is still the father of the children and therefore has a certain amount of nuisance value.

Half-grown, the immature husband is apt to turn to a daughter. Devious and threatening is the technique by which the immature father courts his own daughter, usually a girl in her middle teens. The fact that he does not realize the extent of the damage he is doing the child does not save it from being emotionally an incestuous relationship. Having exhausted his wife's possibilities as a mom surrogate, he turns to his daughter and drains the emotional reserves she is beginning to accumulate. Appealingly, he turns to her at the most critical and vulnerable time of her life, a time when she is to be highly romanticized in her thinking and feeling about older men; when her father is her hero; when her maternity is beginning to put forth tender little shoots. Her ego is flattered by her father's attention and she is easily wooed and won. Between her and her father there is an unspoken pact which excludes the mother. The father lays his troubles upon her small but receptive lap, usually vaguely and sadly intimating that mother does not understand. The daughter has found her mission in life—loving and helping dad. She is only too eager to fetch and carry for him, take off his shoes and give him his aspirin; stroke his tired brow; sit quietly at his side for hours, figuratively and sometimes actually holding his hand.

In the meantime, the child's chances of achieving maturity are being rapidly diminished. If and when she marries, she will find a dilemma and there is serious danger of the marriage being impaled upon the horn of her father-determined emotional infantilism. If she marries an equally immature man, they will live in a doll's house of emotional and social disorder which will always be in imminent danger of crashing about her ears. If she marries a grown-up man, he will soon tire of the "little mother" who is little else. If she has children, she is an exceedingly likely candidate for the ranks of "momism."

Mom twirls her baton at the head of a heavy long procession of surrogates. Should mom drop out of line, there are many who are qualified and anxious to take her place—grandparents, mothers-in-law, bachelor uncles and spinster aunts, cousins, old family friends, occasionally step-mothers; governesses, nurses and school teachers.

Mom's surrogates are protean, appearing in many odd roles and in surprising places. Not always are they of flesh and blood. One surrogate
is to be found in a bottle. I have analyzed carefully the life histories of many alcoholic patients. In a very large number, the childhood pattern of parental loving-dominance was the same, so clear and concrete it could not be missed. These were the children who were told what to do and what to think. Whether they were told with loving solicitude or brutally, made little or no difference to the end result. They were left totally unequipped to meet even minimal standards of grown-up living. After a few ineffectual attempts to find compromises, they hastily retreated and sooner or later discovered the magic of the bottle. Here was something easily obtainable, and not socially reprehensible, at least not for a long time. Alcohol made you feel good. It even made you feel strong and self-reliant. Later, it produced very agreeable fantasies. No longer was the world disagreeable and unkind. It became really pleasant. You were important and wanted. It was even better than having mom to look after and protect you. Alcohol is a mom that can be poured into a glass.

Another surrogate is schizophrenia—a form of mental disease.

I am not suggesting that all youngsters who become schizophrenic had moms instead of mothers. It would not be true but I do believe that an extremely large number did have moms, either maternal or paternal and sometimes both. I have practised psychiatry too long and studied too many adolescent life histories to be deceived by “momish” tricks camouflaged as mother love. I know all too well the dominance or the over-solicitude and over-protectiveness of the mom; the tucking into bed well beyond the tucking age; the little mom-child pacts which exclude not only the other parent but everyone else—“we were so close to each other”; the mom barrier between the child and the small adversities of life; the balm of the blandishments of love, soothing the child’s ruffled feelings. Often, too, I have witnessed one of the cruelest things a mom can do, abruptly withdrawing all emotional support, should the child attempt to take a positive step counter to her wishes. In many schizophrenic patients a true bill of indictment can be drawn against mom—indictment for failure to prepare the child to meet even the minimal demands of adult life. Sometimes, the immaturity is so great and complete that the only path open for the child is the retreat into the fantasy womb of schizophrenia—to remain there forever enwombed. All in all, schizophrenia qualifies as a mom surrogate.

I have taken mom to task in no uncertain terms and I am willing to stand by it. However, mom is far less culpable than the system which has produced her. It is the system that deserves the more severe indictment.

Let me briefly outline the facets of the system:

1. It is likely that the mom is herself the product of a mom.
2. She is almost never criticized or even evaluated, but moves in a rosy aura of perpetual praise and adulation. Complete social approval increases her myopia for the real obligations of motherhood.

If a person makes something, he or she usually is held responsible, partly at least, for how the product turns out. If a man makes a mouse trap which does not catch mice, both he and the trap will be criticized. Certainly the inventor will not be praised for cluttering the market with another useless contraption. When I write a book, I may be praised for that in it which is good but I am very sure to be blamed for that which is not good. If a mother makes a child, no one need tell her she has incurred a responsibility. She knows it and demonstrates her willing acceptance of the responsibility by her day-in and day-out behavior. Only the mom escapes scot-free.

When, as frequently happens, a youngster becomes anti-social or even criminal, public judgment rationalizes the issue. Almost never is the mom (or the system which produced her) tried in the Court of Public Opinion along with her delinquent son or daughter. Instead, the mom is profoundly pitied.

Husbands must be indicted as a part of the mom-making system. At least many husbands deserve to be so indicted. They bargain for certain masculine pursuits and pleasures, perhaps intensive preoccupation with business, golf or stag poker, by offering their wives unlimited opportunities for becoming moms to the children. It is a bad bargain for the wife and it may produce such serious thwartings and frustrations that she has to be a very strong woman, indeed, to resist the lure of the compensations of “momism”. Of course, the husband’s end of the bargain may be compensatory for him and he may not have put the deal through until he realized that he had married a mom instead of a wife and mother.

Inadequate education, deficient childhood relations and a middle life scarred by marital frustration is not an uncommon combination. Our modern culture favors such a policy of do-nothing. Lacking any dynamic conception of the changing family picture, we have failed on the one hand to educate woman for a more creative life outside the home, while on the other we deliberately condone a schism between male and female in the home. We approve the sexless pursuit of business, golf and poker and applaud the wife’s devotion to dishes and diapers. This programme hampers the mutual emotional progress of marriage, so significant for the healthy growth of children.

Deprived of both individual and social fulfillment, it is not surprising that potentially good mothers may regress to momhood. Paradoxically, this regression affords them what social stature they can boast. For while the community denies them the total role of citizens, nevertheless it endows their domestic limits with an artificial halo.
Several decades ago, progressive modern education was badly needed. It brought the education of children out of the pedagogical doldrums. But ultra-progressive modern education swung the pendulum too far away from a sane balance. For one thing, it prohibited the enforcement of discipline in the class-room. For another, it gave young children a too large measure of responsibility in the selection of the curriculum subjects. Finally, it not only abolished rewards and punishments but attempted to annihilate all competition. Little Johnny or Mary must never even faintly suspect that any other child was more accomplished or progressing more rapidly than they. It was kindly and Utopian but scarcely adequate preparation for the kind of a world in which, as adults, the children would have to live and strive.

Ultra-progressive modern education reached its peak in about 1930. Perhaps, in the matter of military ineffectiveness, it is more than coincidence, that a large number of the children who were exposed to it reached military age for World War II. All in all, ultra-progressive modern education aided and abetted the mom and, I think, in some degree must share the blame for her making.

What can be done about it?

Already there have been promising starts made in many directions. There are active mental hygiene groups and energetic parent-teacher associations. All of these need and should have more psychiatric direction and monitoring. It is necessary to exercise forethought and caution so that these various efforts do not fall into the hands of the moms. Real mothers should be very articulate about them. Mom is too apt to use them personally, as weapons to rescue her children from difficulties and to advance the interests of her children at the expense of the children of real mothers.

There is no reason why the complete function of motherhood should not be examined and evaluated like any public question. For instance, like the merits of the Canadian-United States border which was studied and satisfactorily settled some years ago, or like being a Republican or a Democrat in the United States or a Liberal or a Conservative in Canada. Certainly, our two nations have a greater stake in motherhood than in these or any other questions.

It is not easy to uproot a strongly entrenched system. However, other special privileges and other vested interests have been stripped of their baneful influences and there is no reason why the system that has made possible the mom should not be brought under the scrutiny of public opinion. Congress has investigated far less serious and less detrimental situations.

Seriously, for the welfare of the nation it is high time that women should expect to and should be expected to give more evidence of ful-
filling the functions of motherhood, than a collection of the birth certificates of their children. Even exemplary care of the baby during its helpless stage satisfies only the first clause of the obligations of motherhood. This enormously important protective phase is completely nullified unless the mother begins to gradually exercise the second part of her dual function, releasing the child from the protection of its emotional identification with her. If continued overlong, it becomes thralldom, not protection.

That part of the facade of the elaborate structure concealing the dangers of “momism” which has been built in by selfish husbands should be demolished. Whether the pretense be devotion to business or profession, or whether it is on the lower level of the constant pursuit of stag pleasure and interests, it is the evasion of taking the time and trouble to make that contribution to the maturing of children, particularly boys, which only the father can make. I know some husbands whose only contribution to the functions of fatherhood seems to consist of frequent and deep libations drunk at convivial male gatherings to the “fine little woman who is at home taking care of the children”. The wife is left holding the bag. It is an empty bag. If she has in her any of the makings of immaturity she is likely to fill the bag with deep and dangerous emotional attachments to her children, which take the place of those her husband tossed aside. Time honoured excuses—“too busy”, “I have to keep my mind on my business”, “too tired out”, “I have to keep myself in good physical trim”, “I need diversion” should be stripped of their veneer and the selfishness beneath them exposed. No man whether he be the executive of a huge corporation or an humble labourer has the right to evade his plain duty toward his children and his participation with his wife in the performance of that duty. It is one of those crimes against children and against society, not punishable by law, but actually much more serious in its baneful effects than many things prescribed by the criminal code.

There is a defect in our social system which mitigates against the mother and adds dubious prestige to the mom. It is made somewhat too difficult for women, particularly married women, to participate fully in civic affairs. Yet it would be impossible to imagine anyone whose experiences would be more fruitful and whose counsel would be wiser than those of a well-adjusted wife and mother. She knows the needs of children, certainly the paramount consideration of the nation. The knowledge of children and their needs of the professional politician is apt to be restricted to expert techniques of kissing them when electioneering. The mother who has been frustrated in her marriage but nevertheless has been strong and determined enough not to lower her ideals of motherhood is splendid material for participation in public affairs. She refuses to compensate for her marital frustration by crippling her
MOTHERHOOD AND MOMISM—EFFECT ON THE NATION

children with emotional over-attachments. Therefore, she has much to give to the community which would be helpful to others and notably to children. The defect which denies the right kind of women total participation in political and other activities should be corrected by educating public opinion as soon as possible.

Without much protest, perhaps not enough, education has accepted many radical curricular changes because of the war. Not because of the war, but because the war has emphasized the need for it, schools might well introduce courses in parenthood and particularly for girls in the art of motherhood. Such instruction could scarcely be begun too early or continued too long. Children who imbibed the lessons of true motherhood would gain an insight into the tricks of momism; and would detect the subterfuges of moms and stubbornly resist them.

Our war experiences point and emphasize this threat to our survival. There were an alarming number of so-called “psychoneurotic” young Americans uncovered at induction or after a brief trial of service, usually not the psychoneuroses of civilian life, having their origin in complex emotional conflicts, but often a kind of bastard psychiatric reaction, having its basis in a lack of motivations, indecision, insecurity and immaturity. These slender reeds were not broken by the geographical, climatic and physical and emotional hazards of war. The majority broke within the continental limits without ever having seen the enemy, much less having fought him. No one could view this huge test tube of man power, tried and found wanting, without realizing that an extremely important factor was the inability or unwillingness of the American mom and her surrogates to grant the boon of emotional emancipation during childhood. Already we have incurred a large penalty. The threat to our security must not be allowed to go farther.

Finally, again I should like to point out on the social map of democracy the “I and You territory”; the land intermediate between individual personal rights, liberties and privileges and social contributions, duties and obligations; the country upon which each one of us has a mutual but small claim. Although this territory has no actual existence, yet in it the war was fought. Had there not been enough sons and daughters of real mothers to subscribe to its charter of “give and take”, “I but also you”, “I but also society”, “I but the nation too”, then we would have lost the war. Even more significantly, in this territory we will win or lose the peace. Here will be determined the fate of democracy. If too many “squatters”, sons and daughters of moms inhabit this land, then the mature sons and daughters of true mothers will be dispossessed and our democracy shall perish from the face of the earth.
Endometriosis: A Review and Presentation of a Case

By Earl R. Plunkett and Maurice Zaltz, M.D.s. '46

To understand better the pathogenesis of endometriosis, we present a brief outline of the embryology of the female genital system.

The paramesonephric ducts (Müllerian ducts) appear about the sixth week in utero. They begin as a grooving and invagination of the coelomic epithelium, dorsi lateral to the mesonephric ridge. They progress caudally as cellular rods which eventually acquire a lumen. About the eighth week they have reached the caudal extremity of the mesonephros, and now grow toward the midline, combine there and continue caudalward to end on the Müllerian eminence of the urogenital sinus.

The upper vertical portions of the ducts become the Fallopian tubes. The original coelomic invaginations persist as the peritoneal openings of the tubes. The combined lower portion becomes the uterus and vagina.

Note particularly in this résumé that the paramesonephric ducts are of coelomic derivation.

There are many theories of the pathogenesis of endometriosis and we reproduce here a few of the more plausible ones.

Iwanoff advanced the theory which is generally accepted by the European school and now being endorsed by many North American pathologists, including Boyd, that coelomic mesothelium can undergo metaplasia and so produce endometrial-like tissue. This coincides nicely with Meigs observation that endometriosis is commoner in private patients where marriage occurs later and child-bearing less frequent than in the ward patients. He explains this by a prolonged and excessive stimulation of the coelomic epithelium by progestins and oestrins in the former class.

As appealing as this theory is, however, we do not feel that it adequately accounts for the occurrence of the tumour in abdominal wounds following surgery, or in the lung, etc.

Sampson's theory states that retrograde menstrual flow carries endometrial tissue and debris back through the tubes, where some may implant on the peritoneum and grow. This has been done in animal experiments where it was found 80% of these artificial implants did grow. Sampson also has found endometrial tissue in the lymphatics, and bases endometriosis of lung, arm, etc., on lymphatic or hematogenous spread.
Foetal cell rests of the Müllerian ducts have been held responsible by other workers.

Thus the pathogenesis of endometriosis is far from settled. In fact, Ewing has suggested that certain tumours, at present classified as endometriomata, are in reality of different origin. For example, the chocolate cyst of the ovary may well be of Graafian follicle origin. It is well known that the epithelium of such cysts, especially atretic ones may be indistinguishable from endometrium.

Incidence and Location

In a series of 1,000 gynecological surgery cases, 8.9% were found to be endometriosis. Mayos present a series of 2,062 cases of endometriosis which occurred between 1923 and 1943. From this series the following figures were obtained:

<table>
<thead>
<tr>
<th>Location</th>
<th>Number</th>
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<tbody>
<tr>
<td>Uterus</td>
<td>1,415</td>
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<tr>
<td>Ovary</td>
<td>642</td>
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<tr>
<td>Pelvic Peritoneum</td>
<td>276</td>
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<tr>
<td>Sigmoid, rectum and rectosigmoid</td>
<td>266</td>
</tr>
<tr>
<td>Fallopian tube</td>
<td>142</td>
</tr>
<tr>
<td>Ligaments of the Uterus</td>
<td>133</td>
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<tr>
<td>Cul de sac</td>
<td>110</td>
</tr>
<tr>
<td>Bladder or its peritoneum</td>
<td>52</td>
</tr>
<tr>
<td>Rectovaginal septum</td>
<td>63</td>
</tr>
<tr>
<td>Vaginal wall</td>
<td>39</td>
</tr>
<tr>
<td>Cervix</td>
<td>32</td>
</tr>
<tr>
<td>Abdominal wall</td>
<td>32</td>
</tr>
<tr>
<td>Small intestine</td>
<td>26</td>
</tr>
<tr>
<td>Cecum</td>
<td>14</td>
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<tr>
<td>Umbilicus</td>
<td>9</td>
</tr>
<tr>
<td>Appendix</td>
<td>7</td>
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<tr>
<td>Ureter</td>
<td>6</td>
</tr>
<tr>
<td>Femoral hernia</td>
<td>2</td>
</tr>
<tr>
<td>Labia has no direct mention</td>
<td>1</td>
</tr>
<tr>
<td>Vesico vaginal septum</td>
<td>1</td>
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</tbody>
</table>

In addition to the symptomatic cases of endometriosis, it is known that often small peritoneal implants may exist and cause no trouble. Thus the condition is likely more common than is generally supposed.

Diagnosis and Other Features

The condition is most common between the age of 25 and the menopause. However, cases have been reported at 18 and 67.

Sterility, menorrhagia, metrorrhagia and dysmenorrhea of the acquired type are very characteristic. If the condition affects the bowel, constipation, tenderness and even complete obstruction can occur. In the pelvic colon it may cause dyspareunia.
Upon examination, small irregular thickenings or nodules in the rectovaginal septum or culdesac are highly suggestive. Thickenings in the adnexal tissues, tender to pressure are also common. The uterus may be retroverted and fixed by adhesions. Masson and Cariber say that fibromyomata are associated with endometriosis in 80% of cases.

The differentiation of carcinoma of the bowel and endometriosis is rather difficult. However, in the latter, the general condition of the patient is good. There is also less likelihood of blood in the stool, because endometriosis is found in the serosa and muscularis, but not in the mucosa. Radiologically, there is little to characterize endometriosis except an intact mucosa.

Treatment

Endometriosis can nearly always be cured by sterilization, either through surgical castration or deep X-radiation. Thus, cases occurring at or near the menopause present a fairly straightforward problem. The case of the younger woman is, however, more perplexing. In some of these latter cases, relief to a degree may be obtained by excision of the tumour, i.e., where it can be localized.

In the recent literature, a new approach to the problem has been tried by Hirst. Large doses of testosterone propionate, he found, stopped the dysmenorrhea and greatly reduced the size of the tumour mass. Masculinizing side effects, however, appeared, and when the hormone was stopped, the condition again became established. Hirst also mentions progesterone as having a beneficial effect.

Thus, at present, it would appear that sterilization is the only cure but that palliative hormone therapy might delay this measure for a time.

Endometriosis of the Small Bowel with Partial Obstruction

The following case is that concerning a patient of Dr. G. T. Whitty and is taken from the files of Hotel-Dieu-de-St. Joseph Hospital, Windsor, Ontario. At this time we would like to take the opportunity to thank Dr. S. M. Asselstine for the pathologist’s report which appears below and Dr. S. H. Campbell for the surgeon’s report.

The patient, Mrs. M. M., white female, aged 38, was admitted on emergency service at noon on July 1. At this time she complained of severe pain which was diffuse throughout the whole abdomen but was most intense in the right lower quadrant.

On admission temperature 97.5, pulse 80, respirations 20. White blood count 14,900 with 78% polymorphonuclears. Urine: Acid, yellow in colour, S.G. 1016, albumin neg., few pus cells present.

Examination

The patient complained of a severe abdominal pain of about 12
hours' duration. This pain was followed by vomiting in 4 hours. The pain was diffuse and was most marked in the right lower quadrant. Examination showed tenderness over the whole abdomen, with its greatest accentuation in the area of McBurney's point. There was some rectus rigidity and muscular guarding. Rovsing's sign was negative. Vaginal examination showed tenderness in the right lower quadrant, the maximum point of tenderness being at a level higher than that found in a salpingitis.

The patient gave a history of pains of similar nature which had occurred intermittently for a period of several years. She said these seemed to occur at her periods and lasted for a few hours although they did sometimes occur in the intermenstrual period.

Functional History

**Gastrointestinal**—feels that she has been constipated for years.

**Genito-urinary**—kidney functions normal.

**Sexual History**—appears to be a normal female of 38 years of age.

The patient began to menstruate at the age of 13. Her periods were normal onsetting every 24 days and lasting for 3 to 4 days. These were unassociated with pain and did not restrict her activities. About twelve years ago the patient noted a change in her menstrual periods. They still occurred every 24 days but the amount of bleeding was scanty. About twelve hours after the onset of the menstrual flow the patient would experience severe crampy abdominal pains which would confine her to bed. These would last for 12 hours. The pain was unassociated with vomiting. These pains continued with each menstrual cycle until the present time. At various times the patient tried nationally advertised patent medicines for menstrual pain but these did not alleviate her condition.

The patient has a history of six pregnancies:

1st 17 years ago—The child died at birth.
2nd 15 years ago—The child is alive and well.
3rd 12 years ago—The child is alive and well.
4th 11 years ago—Ended in abortion.
5th 10 years ago—Child died at birth.
6th 6 years ago—Child alive and well.

The patient was operated on July 1st, 1945, with a pre-operative diagnosis of appendicitis and partial bowel obstruction.

**Surgeon's Report**—Dr. S. H. Campbell

Abdomen was opened with a right rectus incision. Free fluid escaped on opening into the peritoneal cavity. Appendix appeared quite normal and was bound down with a few adhesions. The ovaries and uterus were normal. About four cms. from the caecum the ileum was constricted by a hard fibrous area. At this point the bowel seemed to run at an acute right angle. There was a suspicion of an inflammatory
area a little more proximal to the caecum. Only the former was resected.

Pathologist's Report—Dr. S. M. Asselstine

Macroscopic—An appendix of normal size. Section of small bowel 5 cms. long showing some haemorrhagic areas under the serosa.

Microscopic—The lumen of the appendix was obliterated. The wall appears normal except for some glandular like tissue which is endometrial in nature.

The microscopic section of the small bowel showed normal mucosa and submucosa. The muscularis was thickened and small areas of endometrial tissue extended into the circular layers of the muscular coat. The serosa was thickened and showed areas of haemorrhage and round cell infiltration.

Points in post-operative care

On return from the operating room the patient had a Levine tube inserted and a continuous Wangensteen drainage was begun. At no time was the patient distended with gas.

On July 6 she began to menstruate and once again experienced crampy abdominal pains similar in nature to that which she had experienced at her periods for the last 12 years. These pains lasted for two days. These abdominal pains ceased when the patient stopped menstruating.

Summary

This case is not offered as a method of treatment for bowel obstruction but rather as a report of the surgical and pathological findings in a case of partial obstruction of the terminal ileum by ectopic endometrial tissue and its consequent fibroblastic reaction. Only the part of the treatment which is of interest in the case has been included.

Conclusion—The patient, a 38 year old white female, was operated on for a preoperative diagnosis of appendicitis and partial bowel obstruction of unknown cause. It was only from the pathologist's report that the true condition of endometriosis of the ileum as determined.

Further due to the pain which was crampy in nature which she experienced at the time of her menstrual period while in the hospital one was led to suspect that there are other clumps of endometrial tissue present in the abdominal visceral walls and that the patient should be kept under observation for some time.

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Baldness

By WILLIAM D. WILKEY, MEDS. '46

BALDNESS is one of the commonest afflictions of mankind. In fact, examination has revealed that some 40 percent of our fellows are to some degree affected with baldness or alopecia, to give it its proper scientific name. It was called alopecia by the Greeks in whose language it meant a fox, the idea being that foxes are commonly “bald” in patches over their furry coat.

To the Greeks the hair was considered as one of the finest ornaments of the human body. The length and curliness of it was a source of great pride to them. The higher strata of society were allowed flowing locks curled at the neighborhood hairdressers, while the slaves and public criminals were shaved until their heads were as bare as the soles of their feet. Caesar, across the sea, was shamefully bald and of all the honors bestowed upon him, he considered as greatest the permission to wear permanently his laurel to cover up his deficiency of hair.

Densely grown hair has always been considered as a symbol of vigor and strength and the lack of it was a mark of indignity; to be sure, it was a sure sign of the wrath of the Gods. Elisha, a Biblical character, was mocked by little children who said to him, “Go up thou baldhead” in their most scornful manner. One of the most degrading forms of expressing contempt among the ancient Jews was plucking of the hair for such offenses as irregular marriages. Arabs, when accused of a crime, concluded their oath with, “If I have done it, then may the Lord turn my locks into a bald head.” And one of the chief sacrifices of the Arabs on their pilgrimage to Mecca is that of their hair. Biege mentions a Norman bishop who acquired great honor by preaching a sermon to Henry I and his court against long and curled hair. The King and his courtiers were so much affected by the sermon that they consented to “resign their flowing ringlets” of which they had been so vain. The bishop, delighted (and prepared), pulled a pair of scissors out of his sleeve and proceeded to cut off the royal locks himself.

Classification of Alopecia

The following is a working classification of alopecia. It is not original, having been stolen from some forgotten source.

A. Congenital Alopecia:
   1. hydrotic.
   2. anhydrotic.

B. Acquired Alopecia:
   1. symptomatic; that is, a symptom of a disease either—(a) a constitutional disease. (b) a local disease of the scalp.
2. common baldness (alopecia premature and alopecia senilis).
3. alopecia areata.

A. Congenital Alopecia (Alopecia Adnata)

This condition is quite uncommon compared to the acquired variety. It is due to an arrested development of the hair follicle resulting in a complete or partial absence of hair on the scalp and other hair-bearing areas. There are two forms of congenital alopecia, the hydrotic type and the anhydrotic type. Both of these are usually part of a generalized dystrophy of the ectodermal tissues.

The hydrotic form is by far the commonest. In this country, it appears most often in those of French descent. The ectodermal dysplasia of which it is part is inherited as a Mendelian non-sex-linked dominant. Males and females are, therefore, affected equally and one-half of the children of an affected parent are themselves affected. In all the families reported to date, only one of the parents has had the defect so that not more than one factor could be inherited by the children, i.e., the condition is in the heterozygous state. What would happen if one factor were inherited from each parent, i.e., a homozygous state, is not known for humans but with mice the state is lethal!

The hair lack may be extreme or very mild. In the pronounced forms there is very little hair anywhere on the body and what hair is present is fine, white, short, and lanugo-like. Usually the head is covered with sparse, straight hair which wears off easily and seldom gets beyond an inch or two in length. But the alopecia is not the constant characteristic of this group of ectodermally defective persons; the one anomaly almost always present is a nail defect; the alopecia is present in only about sixty percent of these people. The nails are short, thick, opaque and yellowish, and prone to infection because they cannot be kept clean. Other ectodermal defects are often observed such as rough, dry, thickened skin on the palms and soles, stammering, mental defective­ness, strabismus, cataract, and possible defects in the endocrines derived from ectoderm, i.e., the anterior lobe of the pituitary, the adrenal medulla, the gonads and the thyroid.

The anhydrotic form is probably rarer than hen's teeth. Only about thirty cases have been described in the world's literature. They may be of any race but are almost always males. The condition is inherited as a recessive so that a family history of the condition is uncommon. It is called anhydrotic because of the diminished number or absence of the sweat glands. Because of this, death often occurs very early in life from hyperpyrexia. There is an accompanying dental aplasia—the teeth are missing or deformed. An atrophic rhinitis is present in which there is an almost complete absence of the mucus glands.
in the nose and throat. Finally, there is the hair anomaly similar to that seen in the commoner hydrotic form of congenital alopecia.

B. Acquired Alopecia

1. Symptomatic.

   (a) of constitutional origin.

   There is a temporary loss of hair with no scalp disease but following any one of several diseases and conditions of the body as a whole. The loss of hair may be rapid or more gradual. A comparatively rapid loss of hair occurs following acute specific fevers such as influenza where there is often a latency of about two months. It may also follow parturition, the ingestion of thallium acetate (as in the treatment of ringworm of the scalp), and following a psychic shock. The latter is an interesting condition termed alopecia neurotica. It may occur shortly after acute nervous shock, prolonged mental stress, war neurosis, stark terror. In young unmarried girls it not uncommonly follows rapacious assault. A more gradual loss of hair may be observed in cachectic conditions such as the end stages of a malignancy, or in tuberculosis, diabetes or syphilis. The latter occurs as a patchy, "moth-eaten" alopecia in the occipital or temporal region of the scalp. If the underlying condition can be cleared up, the prognosis of symptomatic alopecia of constitutional origin is good.

   (b) of local origin.

   There are many local conditions of the scalp which will result in complete or partial baldness. These are listed below; the more important ones will be commented upon.

   1. Direct trauma.
   2. Injuries to nerve trunks.
   3. Furunculosis.
   4. Ringworm and kerion.
   5. Favus.
   7. Folliculitis decalvans.
   8. Seborrheic dermatitis.

   Trauma includes avulsion, electrolysis, friction, local chemical and physical agents, burns, X-ray and radium. One interesting form of avulsion is called trichotillomania. This is the mania for manually epilating one’s own hair and is usually seen in the mentally ill but also as a neurosis during mental occupation such as studying, during pregnancy, etc.

   Ringworm of the scalp occurs under the age of 14, as a rule, being rare in adults. It is caused by the Microsporon Oudouini and is contracted by direct contact, or by caps, hairbrushes, etc. The incubation period is 6-8 weeks. It appears as small, greyish, scaly patches covered
with broken hairs. These patches gradually increase in size and number until most or all of the scalp is involved. This may be complicated by an acute inflammatory reaction called a kerion in which the patch becomes swollen, red and boggy and the hairs become surrounded with pus and fall out. Microscopically, the hair is covered with polygonal spores. Treatment is the complete removal of the hair either by clipping or by x-ray and/or thallium acetate. This is followed by the application of antiseptics such as ammoniated mercury or Whitfield’s ointment, etc. For a kerion, the head is bathed twice a day in hot water and an antiseptic is applied.

Favus is uncommon. It is characterized by yellow cups two or three millimetres in diameter embedded in the skin, each one surrounding a hair. These cups or scutula are composed of a dense feltwork of mycelium which gives a mousy odor to the scalp.

Seborrhoeic dermatitis, according to Sabouraud, is the usual cause of ordinary premature and senile alopecia. This will be discussed below.

2. Alopecia Prematura and Senilis;

These conditions are the commonest forms of baldness seen; they are the everyday garden-variety type of alopecia occurring in 43% of otherwise normal adult males. Actually, they are both the same condition which, if it occurs before middle age, is called premature alopecia, and if occurring later, is called senile alopecia.

The etiology and significance of baldness has been a mystery for thousands of years and has led to innumerable speculations. At one time it was considered as evidence of the wrath of the gods for some misdemeanour. Others dreaded baldness because it was considered as the first stage of leprosy which excluded the afflicted individual from society. The American Indians believed that the hair concealed the soul and to cut the hair was to remove the soul from a person. This is the origin of scalping; the enemy was scalped and the hair kept so that the soul could not be released to haunt the aggressor.

Some of the older scientific explanations were pretty fanciful, such as the following: "The various emotions to which the mind is subject act as directing cause for baldness; for under the wearing exercise of thought, the nerve’s supply to the hair follicle is cut off, the blood vessels receiving their nerve filaments from such sources first become dilated, then contracted, thus producing stagnation of the hair bulb. . . . Those concerned with the preservation of hair should avoid all excesses or extraordinary excitement. They should shun mental and body over-stimulation. . . .” This is the nervous exhaustion theory and may, or may not, be a good excuse for the “baldheads” to lead a more retired and less strenuous life.
Some believed that baldness was due to overheating of the scalp from enlargement of its blood vessels; this vasodilation in turn was due to a strong cardiac action and rich blood. The Migration Theory is an amusing one. The body is supposed to have a certain hair-forming ability which is constant in a single person. If the hair is lost from the scalp it merely means that the body has diverted its hair-forming ability from the scalp to the chest or some other location. The head hair is not lost, therefore, but has merely migrated to another part of the body.

Hats have often been condemned as a cause of baldness. They exclude the growth-stimulating air and sunlight and compress the scalp vessels by their mighty weight.

Some consider that hair on the head is merely a transitional stage in man’s evolution. The general bareness of the body comes from the habit of wearing clothes. When a hat is worn, the hair falls out since it is protected, as is the body skin by clothes. Someone pointed out, however, that nowhere are so few hats worn as in Germany; yet here are the greatest number of bald heads.

One theory was that baldness resulted from nutritive interference as a result of atrophy of the subcutaneous fat in the scalp. Thus women and others with fat heads were spared the disfigurement. Others, obviously with long, flowing locks, stated that the bald-headed persons were really the fatheads, the subcutaneous fat starving out the hair follicles. Others say that fatheads have more pronounced and more constant characteristics than either baldness or an abundance of hair!

More recently dietary factors have been investigated as possible trophic factors. Several workers have described alopecia in rats fed on diets lacking in pantothenic acid or inositol. Administration of these to the affected rats resulted in the regrowth of hair. The application of this to humans is questionable.

There is no doubt that hair growth is under the influence of the endocrines. Cretins have scanty, straight, dry hair and thyroidectomy is occasionally followed by the fall of head hair. Adrenal disease, such as the adreno-cortical syndrome, and pituitary disorders such as acromegaly are often accompanied by an increase in hair growth. Pituitary hypofunction as in Simmond’s disease commonly is manifested by a loss of hair. Workers have shown that the presence of hair is dependent upon two hormones secreted by the adrenal gland; one for sexual and one for asexual hair. Danforth concludes that the evidences for an endocrine influence, though numerous, are difficult to interpret and that a practical knowledge of their mode of action is lacking.

Hamilton has reported data indicating that androgens are an excitant to common baldness and that both the action of androgens and
a genetic predisposition are prerequisite to the development of alopecia. He noticed that baldness never occurred at any age in 54 men castrated before or during adolescence. Dandruff and sebaceous secretion were diminished in the castrates. Upon the administration of testosterone in the same dose as is produced naturally by the testes, a normal type of baldness appeared in several of them and the extension of the baldness ceased when the hormone was not given. Only those in whom there was a family predisposition towards baldness began to lose their hair; those with no baldness in their family, although given testosterone, did not develop alopecia. Hamilton points out that baldness may occur in women with arrhenoblastomas or adrenal cortical tumors which increase the secretion of androgens in the female. He concludes that androgens are members of a family of indirect causes that induce baldness in those patterned areas made susceptible by a genetic predisposition.

That there is a hereditary factor in the production of baldness is undisputed. We all know many families with an abundance of bald heads and others in which bald heads are never or only occasionally seen. Dorothy Osborn in 1916 tabulated the results of inheritance on baldness in 21 families. The condition was found to be a sex-linked trait, acting as a dominant in men but as a recessive in women, thus explaining its rarity in women.

Sabouraud points out that 90 percent of bald heads show evidence of seborrhea oleosa (a greasy condition of the skin) with the presence of many microbacilli. This, he says, is the most important factor in the production of baldness. In the usual case, the sequence of events is, first, dandruff (pityriasis simplex capitis), then, pityriasis steatoides in which a serious exudate is present, giving an oily character to the scalp, and finally, alopecia. Such a condition is called seborrheic alopecia and includes both premature and senile alopecia.

Miller4 has an interesting theory. He says that alopecia is primarily a generalized primate trait instead of a strictly human development. One of the great heritage of characteristics shared by man and his fellow primates is patterning. This is inherent in all animals and consists in the arrangement of contrasted color areas on the body, e.g., the wings of a butterfly, or variously-sized hairy outgrowths. In the primates, patterning is most conspicuously developed on the head and man’s patterning commonly duplicates that seen in the various species of monkeys and apes. The types of baldness seen in men, that is, the various patterns of it, usually have an equivalent in the lower primates. Man, therefore, is bald because as a primate he cannot avoid it for it is imposed upon him by his private heritage. Miller concludes that the man who would avoid baldness had better use greater care in the choice of his ancestors!
The treatment of baldness is a $64 question. The therapy through the ages has been as varied as it has been ineffective. The Egyptian sure-fire cure was a mixture of equal parts of the fat of a lion, a hippopotamus, a crocodile, and a serpent. Burnt ashes of goats were used on the really desperate cases. If this did not work and you still felt brave, you could try dogs’ urine or the urine of a pregnant woman. Someone thought that hair could not help but grow in a gunshot mixture of leeches, bees, wasps, and salt, equal parts of each buried under a hot house for eight days and applied to the scalp. Equally as efficient and easier to perform was rubbing the scalp with onions.

Today, we have no sure ways of restoring hair on billiard-ball heads and there is only one infallible method of preventing extension of baldness. One simple procedure will for the rest of your days retain what hair you have on your scalp. It may also change the pitch of your voice a bit and perhaps cause you to put on a little weight about the hips but you don’t want to be called “baldie” in a couple of years, do you? Or do you? For that procedure, that is, the only sure method, is castration. Other methods that are less efficient but a little more practical are ultra-violet light, vacuum pressure, and endocrine therapy. The administration of pituitary extract created quite a stir in 1931 but was eventually found to be of no practical value. Pilocarpine is said to have an action on the sympathetic nervous system which is antagonistic to thallium. It is incorporated in many liniments and lotions which are very questionable in their growth-restoring and hair-retaining properties. Foreign proteins and vitamins have been tried without much success. The surgeons have taken up the battle and have used full thickness grafts of hair-bearing areas from the sides and back of the head. The prevention of baldness in those with a family history by cleanliness and mild antisepsis has been advocated. I think we shall have to resign ourselves, for the time being at least, to our fate as did Shakespeare when he put in the mouth of one of his characters, “Time itself is bald and therefore to the World’s end will have bald followers”.

3. Alopecia Areata;

This is a condition of unknown etiology in which certain hairy areas suddenly become devoid of hair. These areas appear on apparently normal skin and vary greatly in size and shape. As a rule, they are at first round or oval but there may be a single band-like alopecia at the periphery of the hair line, a condition known as ophiasis. The skin in these areas is left with its normal satin-like finish and a whitish color and is completely devoid of hair except at the margins. Here are found easily epilated, short stumps of hair the shape of an exclamation mark (!). The bald areas extend peripherally and tend to coalesce. The process may stop when the area is still the size of a quarter or it may continue until the entire scalp or, indeed, the entire body is devoid of hair. The
latter is uncommon and is called alopecia universalis. As a rule, however, the areas remain small and the full size is attained in 12 hours to a week or more. The bald spots are usually found on the scalp but they may also occur on the eyebrows, beard pubis and axilla.

Alopecia areata is commonest in the second and third decades. In almost all cases, it is chronic and recurrent, the attacks occurring at monthly or yearly intervals until the disease is cured. It is interesting to note that alopecia areata, as congenital alopecia, is often accompanied by nail changes such as white streaks, brittleness, fissuring, and atrophy.

The etiology is unknown but the theories include disturbances of nutrition, of the endocrines, of the sympathetic nervous system, and a parasitic theory.

Unless the alopecia is total, i.e., involving the entire scalp, or occurs in the older age groups, the prognosis is good and the hair grows in gradually. At first the growth is fine, white and lanugo-like but this is soon replaced by a normal growth of normal hair. The usual case is benign and complete re-growth occurs in 3 to 6 months. Relapses are common and may be caused by pregnancy, menstrual disturbance, and intercurrent disease. Complete recovery often occurs in children when they reach puberty. In total alopecia the prognosis is very bad. Lanugo hairs do not appear for 2 to 5 years and it is some time before these are replaced by permanent hair.

There is no specific treatment for alopecia areata since the etiology is uncertain. Usually local irritants such as chrysarobin, oil of cade, cantharides, phenol, tincture of iodine, etc., are applied to the scalp. A popular prescription is:

Deodorized Oil of Cade
Vaseline
Lanoline

Sig. Vigorously massage the scalp with this every night; wash out in the morning with 1:30 acetic acid in acetone.

Ultra-violet light may also be used and is very efficacious in many cases. Endocrines are occasionally useful if there is any evidence of endocrinopathy.

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Tropical Climates and Their Effects on Man*

By PROF. H. C. BAZETT, M.A., M.D., F.R.C.S.

STUDIES on the effects of tropical climates on men have become a function of both Canadian and American Subcommittees on clothing, notwithstanding the fact that the best that can be done with clothing under such circumstances is to reduce it to the minimum. This situation depends on the fact that the initial war problems dealing with temperature concerned protection against the cold of high altitudes. It was natural therefore for such committees to turn their attention to the opposite extreme, even though the solution here was likely to be mainly a matter of housing and air-conditioning, rather than clothing.

Tropical conditions include places with very high temperatures and low humidities, and others where the temperatures are not excessive but where the humidity is high. The latter are of particular importance to navies, since the climate in tropical ports, as well as at sea, is apt to be of this type, and it is more possible to control conditions on board ship than those for a moving army on land. For the comparison of conditions in different areas a scale is required which takes into consideration not only dry bulb temperature but also the relative humidity and the amount of air movement. The scale commonly used, which though not perfect is fairly accurate, is one called the effective temperature scale. By means of graphs based on experimental data and given condition may be represented by the dry bulb temperature which would give approximately the same ease or difficulty of heat loss, if there was no air movement and the air was completely saturated with moisture. Thus London, Ontario, at mid-day if the temperature was 84°F and the relative humidity was 45% with little or no air movement would have an effective temperature of 76°F. This would be a common hot mid-day temperature for August.

The relative humidities usually given in meteorological records are likely to be much higher than this 45% cited above. Such measurements are made in the early morning and evening when the actual moisture content is much the same as at mid-day, but the temperature of the air is lower, its capacity to take up water is less and consequently the relative humidity is higher. Consideration of moisture in terms of relative humidity stems from its interest to the textile industry where this is the factor of importance. From the human point of view it is the absolute moisture content that matters, since this determines


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the capacity of the air to absorb water at the temperature of the skin and therefore to allow evaporation of sweat. This water is evaporated from the skin and mouth at a temperature which cannot exceed 97°F (36°C), unless the deep body temperature is above normal. At such a temperature water tends to be evaporated and the vapor exerts a pressure of 45 m.m. of mercury. The capacity of air to take up water at this temperature on the skin surface may therefore be considered as proportional to the difference in vapor pressure on the skin (45 m.m.) and that in the surrounding air; this may be called the water acceptance value. The water acceptance value for the hypothetical summer midday in London already considered would be 31.5 m.m.

The dry-bulb temperatures in the humid tropical areas are not particularly high. Thus to compare with common mid-day temperatures of 84° on Summer days in London, Bombay has a monthly average mid-day temperature for the winter month of December of 82.1° and for the summer month of May of 88.3°. On the other hand the water acceptance value is lowered to an average value of 29.4 m.m. in Bombay even in their winter, and to 22.6 in their summer month of May, while on individual days it may be lowered below 20 or even in the harbor to 15 m.m. In consequence according to the effective temperature scale average conditions at mid-day in Bombay for all months of the year are much hotter than in any month in London and often 5 to 7° hotter even than in Philadelphia in July and August. On board ship where the ship's hull may catch the sun, and where sources of power give extra "wild" heat, the effective temperatures experienced even at night may exceed by several degrees the highest temperatures experienced in Philadelphia at mid-day on the hottest day of the year.

The main difficulty about the tropical climates is not so much the high level reached at its maximum, as the consistency with which high levels are maintained. Professor D. H. K. Lee of the University of Queensland at Brisbane has had experience not only in experimental laboratories but also in the tropical areas of Australia and he draws the following conclusions. Climates are unsuitable for continued residence of white races when the effective temperature has a daily variation of less than 7.5°F, or when the annual variation is less than 10°F. On both these counts Bombay is unsuitable. Lee also considers places unsuitable where the effective temperature at 9 A.M. consistently exceeds 80°F. This also is the case in Bombay for 4 or 5 months in the year. Yet Bombay may be considered as one of the healthier and cooler of India's coastal cities.

Serious illness as the direct effect of the heat is rare, and heat stroke in healthy subjects is not common. Heat exhaustion during heavy work in the heat may occur but recovery usually occurs rapidly with cessation of work. On the other hand real physical health and high
efficiency is rare. Sweating is a continuous process, and this, more frequently than not, ultimately causes diffuse skin rashes known as prickly heat accompanied by itching. There is abundant evidence, though mostly badly documented, of inefficiency, inaccuracy and slowness in the performance of simple tasks demanding mental concentration.

Such inefficiencies would grossly lower the standards attainable by an army or a ship's crew. The period of the day during which work may be carried out may also be limited. Thus in the Indian planes during the summer ground crews may only be able to service planes between 7 A.M. and 10 A.M., or possibly as late as mid-day. In the evening it is too hot to work or sleep. The men do not get to sleep till late, and so cannot routinely start work before 7 A.M. They cannot continue on the aerodrome after 10 A.M. because the planes are too hot to touch. After mid-day the hangars are unbearable. Thus the wastage of man power is high.

Much might be done in increasing efficiency, if sleeping quarters could be cooled. Then sound restful sleep could be insured, even if the conditions in working spaces could not be improved. However, air-conditioning of sleeping quarters in the tropics is not easily attained. Not only does it demand an adequate supply of air-conditioning equipment but also the complete rebuilding of the housing accommodation. Windowless huts of bamboo construction would have to be replaced by solid structures with well insulated walls and double windows. In ships changes are also not easily made, for insulation interferes with damage control, and air-conditioners add top weight, which can only be accepted if other weight is discarded. While it is probable from general experience that it is more important to cool sleeping spaces than working spaces, this is by no means proven. In fact the opposite may readily be true for certain critical jobs such as telegraphy, radio, radar controls and the like, for there seems little doubt that maximal deterioration of efficiency is seen in the sedentary jobs.

The physiological mechanisms which may be employed in meeting the situation are of interest. Clothing is best reduced to the minimum and on board ship is commonly so reduced to shorts and sandals. The main difficulty may then be where the badges of rank should be worn! On land conditions are quite different for various insects, such as leaches, make skin protection necessary by day, and at night mosquitoes and the threat of malaria make it even more essential.

The normal insulations utilized in temperate conditions are the insulating value of the skin and subcutaneous tissues, that of the clothes, and that of the air. If the insulating value of normal indoor clothing in Canada and the States be taken as a standard and its value be called 1 Clo unit, then during the winter time in still air when the
subject is cold with the skin vessels vaso-constricted the total insulation might reach 2.6 Clo. Of this 0.8 would be contributed by the tissues, 1.0 by the clothes and 0.8 by the air. If the temperature of the environment were raised this insulation could be reduced to about 0.6 Clo by removing clothes, using a fan to give air movement and so reduce air insulation to 0.4 and by vaso-dilation which could lower tissue insulation to 0.2. By such adjustments heat balance at rest could be maintained without sweating at an environmental temperature of about 91°F dry bulb. If the individual was acclimatized to a tropical climate, he could probably do a little better and reduce the total insulation to about 0.5, and be able to accommodate to about 92°F. This gain is attained by a capacity for still greater vasodilation.

If the individual was doing light muscular work he would be forced to sweat violently under such conditions, but in doing so he would also reduce the effective insulation of his environment. The bulk of the heat loss would have to be transmitted across the skin but much of this heat would be generated close to the skin (e.g. in the muscles of the calf) and not have to be transmitted through the body. The muscular movements also facilitate venous return in the dilated veins. In this way the insulating values of the tissues could be reduced to 0.06 Clo. It is no longer easy to consider the total insulation, since most or all of the heat under such conditions is being lost by evaporation. The dry bulb temperature of the air may during sweating rise well above that of the skin, so that the body is gaining, rather than losing, heat by conduction and convection. The simple consideration of insulation no longer applies even approximately, and no attempt will be made here to indicate in figures the more complex situation.

Our present knowledge as to the mechanisms utilized in the final adjustments to the most severe conditions is inadequate. There would appear to be a lowering of basal metabolism of 5 to 10%. Such a change is often considered unimportant but a reduction of 10 or even of 5% for 24 hours a day is by no means negligible. A 10% reduction in 24 hours would be a saving of heat capable of raising the body temperature of an individual from 98.6° to about 104°. The improvement in the capacity to lower the insulation of the tissues is probably to some extent dependent on an increase in blood volume, which allows the individual to dilate fully his superficial veins, as well as the skin capillaries, without being forced to make the necessary blood available by splanchnic vaso-constriction. Such vaso-constriction could obviously not be maintained indefinitely. The change in blood volume with climate can be very large and in many subjects may amount to 1 liter or more. It was first demonstrated by Professor J. Barcroft and his collaborators.

The changes in blood volume may be responsible for a very definite hazard to older subjects when exposed to rapid changes in temperature,
such as are now apt to occur with the possibilities of air travel. It has been demonstrated that cardiac failure in hypertensive subjects in Philadelphia is rare in the hot weather of the summer and equally rare in the very cold weather of the winter. However it is prevalent in the changeable weather of the spring and fall. Since congestive failure is normally accompanied by an excessive blood volume, it is not improbable that a blood volume increased to meet vasodilation in warm weather may be excessive when the weather suddenly becomes colder. Such a maladjustment might be of no importance in a young readily adaptable circulatory system, and yet impose an impossible strain in the presence of advanced arteriosclerosis. It would seem appropriate to warn physicians of the possible exaggeration of such complications in modern life, so that they may be on the look-out for them, and may give the matter proper study, should the fear prove to be warranted.

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Hiatus Hernia

By MAURICE ZALTZ, Meds, '46

Of the group of diaphragmatic herniae, that through the oesophageal hiatus is a very interesting and important member. It is often missed clinically through lack of proper investigation. In this article, which summarizes much of the current literature on the subject, an attempt has been made to present the material in its more important aspects, and to make the reader more conscious of the true position this condition holds in abdominal diagnosis.

I. Definition

A diaphragmatic hernia is defined as a protrusion of abdominal contents into the thorax through an abnormal opening in the diaphragm.

These are divided in the following way:

1. Congenital: due to a defect in formation of the diaphragm.
2. Acquired:
   a. Traumatic — i. direct
      ii. indirect
   b. Inflammatory necrosis

The oesophageal hiatus hernia (syn: hiatal hernia, paraoesophageal hernia, epiphrenic gastric pouch, gastro-oesophageal hernia) is the most important of the congenital group of diaphragmatic herniae and is by far the most common type of diaphragmatic hernia. It is defined as a herniation of the stomach through the oesophageal opening of the diaphragm.

II. Classification

Akerlund proposed the following classification:

1. Congenitally short oesophagus with complete or partial thoracic stomach. This is not a true hernia and will be discussed later under treatment.

2. Para-oesophageal type: The oesophagus is of normal length and its inferior end lies below the diaphragm. The cardiac end of the stomach herniates into the posterior mediastinum through the oesophageal hiatus. This type contributes the small and moderate sized herniae and comprises 33% of Harrington's series.

3. The last type is one in which the oesophagus forms part of the hernial contents. While the oesophagus is of normal length, it is carried upwards into the thorax by the large bulk of herniated viscera or by cicatrical tissue which forms at the gastro-oesophageal junction. This
type is much larger and the posterior mediastinum and one or both of the thoracic cavities are filled by the largest portion of the stomach and part of the colon and omentum. This group constituted 66% of Harrington's series.

In his article, Harrington states that the last two types are basically the same, the difference being in the degree of involvement of the viscera.

III. Anatomy

The oesophageal hiatus is located in the muscular dome of the diaphragm. It lies to the left of the midline at the level of the tenth thoracic vertebra. While an expansile opening is favourable to function of the oesophagus, it is this arrangement which also allows for herniation. Although there are two other major openings in the diaphragm, their structure is such that herniation through them is discouraged. The aortic opening in reality lies behind the diaphragm. It is a firm, non-yielding, osseo-aponeurotic ring. The opening for the inferior vena cava lies in the firm tendinous portion of the diaphragm.

The relations of oesophageal hiatus to the upper portion of the stomach and the lower part of the oesophagus are very important in the mechanism which produces herniation. The hiatus itself is a muscular ring which, while not adherent to the oesophagus, approximates it closely. The fascial coverings of the diaphragm, mostly that on the inferior surface, give rise to the diaphragmatic-oesophageal ligament. This is a fibro-elastic fanlike process which gains attachment to the lower 2 or 3 cm. of the oesophagus and the upper 2 cm. of the stomach. This ligament bridges the interval between the organs mentioned and the hiatus. The membrane is elastic enough to allow for movement of the oesophagus in swallowing and respiration. It is, however, antagonistic to the longitudinal fibres of the oesophagus which tend to draw the cardia up toward and through the hiatus.

The peritoneal covering over the abdominal portion of the oesophagus and the cardia is very loose. This prevents pull on the peritoneum during swallowing and so prevents peritoneal shock. However, this laxity of the peritoneum allows the herniation of the stomach and the upper portion precedes the stomach through the hiatus as the hernial sac.

When hiatus hernia occurs in the aged, it is due to the enlargement of the hiatus orifice by the regression and degenerative change in the diaphragmatic-oesophageal membrane. The latter loses its elasticity and a layer of fibro-fatty tissue about the hiatus, which was present earlier, disappears. While this is given by some as the cause of hiatus hernia in the aged, others believe this is only a precipitating factor which influences an already congenitally weak orifice.
The Hernia Itself

The hernia is usually located behind and to the left of the oesophagus. If it is very large, it may displace the heart. The hernia may be very mobile, in which case its spontaneous return to the abdomen may be watched by fluoroscope. On the other hand, it may be rendered totally motionless by adhesions. The latter circumstances lend more readily to obstruction and are associated with that hernia which gives clinical symptoms. Harrington states that strangulation of the stomach in this hernia is impossible because of the strong musculature and abundant vascularity of the stomach.

IV. Etiology

Hiatus hernia was found to be present by Harrington in 3.5% of 1,500 cases which had barium studies of the gastro-intestinal tract.

1. The condition may occur at any time in life. Symptomatic hernia is most common in the sixth decade.

2. The condition is more common in females due to: (a) pregnancy; (b) greater frequency in constipation; (c) post-menopausal obesity.

3. The condition is most often found in healthy looking obese individuals.

4. Predisposing causes may be summed up as those causing increased intra-abdominal pressure: (a) chronic cough; (b) repeated attacks of vomiting; (c) hypertrophy of prostate causing straining; (d) tight abdominal supports.

5. The local conditions which lead to herniation are: (a) enlargement of the hiatus; (b) loss of elasticity in the diaphragmatic-oesophageal membrane.

The apparent increase in frequency of hiatus hernia is due to a more wary attitude toward the condition and to the development of finer diagnostic methods.

The reasons for missing the diagnosis previously are:

1. Surgically, because the approach was very difficult and so exploration was not undertaken.

2. At post-mortem, tissue relaxation distorted the true condition.

The following figures speak for the changes in views and techniques:

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Period 1</th>
<th>Period 2</th>
<th>Diagnosed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mayo Clinic</td>
<td>1908-26</td>
<td>1926-38</td>
<td>17 cases</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>399 cases diagnosed</td>
</tr>
<tr>
<td>Massachusetts General Hospital</td>
<td>1930-40</td>
<td></td>
<td>221 cases diagnosed</td>
</tr>
</tbody>
</table>

The increase in the number of diagnoses is due to the enlisting of X-ray as an aid.
V. Symptoms

Because of the variety of conditions which hiatus hernia simulates, it has come to be known as "the Masquerader of the Upper Abdomen."

First, one must realize that the condition may be totally asymptomatic and that its chance finding by X-ray is merely an interesting incidental finding.

Where symptoms are present, they may be

1. gastro-intestinal
2. cardio-respiratory

In all, the story given is never that typical of pathology in either system.

The chief complaints are:

1. Pain
   (a) Epigastric, may radiate to back and between scapulae.
   (b) Comes on during or shortly after meals.
   (c) Relieved by vomiting, belching and soda bicarbonate.
   (d) Of few minutes to several hours duration.
   (e) Is much worse when lying down.
   (f) There may be an interval of weeks between attacks.
   (g) Constant pain indicates fixation by adhesions.

2. Loss of weight due to anorexia.
3. Haemetemesis or melena may occur.
4. Anemia occurs in 66% of cases.
5. Heartburn.

The large-sized hernias may also cause cardio-respiratory symptoms:

1. Palpitation
2. Dyspnœa
3. Pain—which may radiate down fingers. These pains may be true anginoid pains which are due to a reflex, the pathway of which is not known. This might cause confusion with angina pectoris or coronary thrombosis. However, exertion has no relation to the pain of hiatus hernia nor is it relieved by nitroglycerine. An emotional factor is present in the production of pain in hiatus hernia.

Most patients with symptomatic hiatus hernia are diagnosed improperly an average of three times at previous medical consultations. The wrong diagnoses made follow in order of frequency: cholecystitis, cholelithiasis, gastric and duodenal ulcers, hyperacidity, secondary anaemia, cardiac disease, cancer of cardia, stricture of oesophagus, appendicitis and intestinal obstruction.
VI. Diagnosis

The aids to diagnosis are:

1. A vague history of upper abdominal pain. The syndrome is characterized by its lack of definite symptoms.
2. Remember its possibility in any differential diagnosis.
3. Encourage the opinion of an alert, technically capable radiologist.

Radiological Diagnosis

A chest film in which a mass is seen behind the heart and in which the mass contains either a bubble of air or a fluid level below an air bubble, should arouse the radiologist's suspicions.

A barium meal should then be given and special positions used for investigation. Films should be obtained in the Trendelenberg, horizontal, upright, supine and oblique right and left positions. Pressure should be exerted on the stomach and shifting of the barium into the herniated pouch should be watched for under the fluoroscope.

VII. Treatment

This portion will only concern itself with indications and general methods of treatment. For the specific detailed surgical methods, a textbook of thoracic surgery should be consulted.

Harrington classifies the cases for treatment into three groups:

Group I: Asymptomatic—No treatment is required. The patient should not be informed of his condition nor should too strenuous an investigation be undertaken because of the psychic factor involved.

Group II: Mild symptoms—Conservative medical treatment is indicated.

Group III: This group constitutes the cases in which

(a) symptoms are severe
(b) conservative treatment has failed
(c) the hernia is larger than 5 cms.

The only treatment of any value in this group is surgical.

Medical Treatment—General measures:

1. Frequent small meals with a minimum of roughage.
2. Prohibit from lying down after meals.
3. Effervescent drink after meals.
4. Push fluids between meals.
5. Remove predisposing factors mentioned above.
6. Iron for the anemia.

Surgical Treatment

1. Of Thoracic Stomach

   This is due to a retardation in the migration caudally of the stomach. In this, the principle of treatment is to move the left portion of the
Hiatus hernia

diaphragm above the stomach and draw the stomach into the abdominal cavity. This is only possible if the distances involved are not too great.

2. For true hiatal hernia some relief may be afforded by left phrenicotomy which relieves spasm of diaphragm and so eases pain.

3. In surgical repair, a preliminary phrenicotomy is later followed by withdrawal of the hernial contents into the abdomen through an upper abdominal incision. The hernial sac is removed and oesophageal hiatus is repaired. This gives permanent relief in a satisfactory number of cases.

This condition has also been repaired by operation using a transpleural approach.

SUMMARY

1. Hiatus hernia is the most common diaphragmatic hernia and with careful investigation can be detected much more often.

2. It is most common in females and in the sixth decade.

3. X-ray provides final diagnosis.

4. Surgical repair of the hernia is satisfactory in cases with severe symptoms.

BIBLIOGRAPHY


PRIMARY UPPER LOBECTOMY vs.
MODERN SELECTIVE THORACOPLASTY IN TREATMENT OF TUBERCULOSIS
By MAJOR MAXWELL CHAMBERLAIN
Selective thoracoplasty and its applications to surgical treatment of tuberculosis are well founded and, until recently, pulmonary resection has been used only as a last resort in treating those patients who were not responding to thoracoplasty. In the last few years, lobectomy has appealed to both surgeon and patient.

Major Chamberlain gives a brief account of the history and prognosis concerning clinical cures and defines both lobectomy and thoracoplasty. Then follows a short discussion on the general considerations of both and, lastly, the physiopathology.

In conclusion, he states that:
1. The choice of therapy depends upon what will control the disease and preserve as much healthy lung as possible.
2. Tuberculosis is always bilateral. Overdistension of remaining lung tissue following lobectomy may excite a previously quiescent lesion.
3. Endobronchial tuberculosis is present in all cases with cavitation and its significance is dependent upon the degree of bronchial stenosis which, in turn, may cause emphysema, suppuration, atelectasis and tension cavities. Thoracoplasty is successful in 75 per cent of cases.
4. Emphysema is present in all cases and proportional to the duration and stage of the disease. Dyspnoea may dominate the clinical picture in far advanced cases.
5. Thoracoplasty is successful as it utilizes four of the five basic therapeutic principles: (a) bronchial drainage; (b) immobility; (c) relaxation and (d) compression. Resection, the fifth principle, may be reserved for its failures.
6. Lobectomy excises only the major active focus and may cause emphysema due to overdistension, reactivation of latent foci, and poor healing in these foci in the overdistended lobes.
7. Primary upper lobectomy is less physiologic than thoracoplasty.
8. Primary upper lobectomy should be secondary to thoracoplasty and is not difficult to perform when adequate exposure is obtained.

GLEN McFADDEN

ELECTRONARCOSSIS—A THERAPY IN SCHIZOPHRENIA
By ESTHER BOGEN TIEFZ, M.D., GEORGE N. THOMPSON, M.D., A. VAN HAREVELD, M.D., and C. A. G. WERSMA, Ph.D.

These investigators offer a new and very encouraging method of treatment of schizophrenia. Of a series of 47 cases of schizophrenia, they report 76 per cent cured or improved as a result of electornarcotic therapy. Electronarcosis, as they have used it, consists of a series of treatments, from 7 to 39, of a prolonged, 60 cycle current of 160 to 250 milliamperes, passed through the temporal region and maintained for 30 seconds. During this initial phase of the treatment tonic spasm is produced. Following this, the current is dropped to 60 to 75 milliamperes. A clonic phase results during which respiratory movements recommence and carbon-dioxide is administered, using a mask. The current is then raised gradually until an inspiratory stridor develops when, after seven minutes, treatment is stopped.

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The results are very encouraging indeed, especially when compared with those of electroshock therapy in which
57 per cent failure is common. Of the 47 patients, 19 were complete recoveries, 17 showed a good social adjustment but retained certain personality defects, five showed definite improvements, and six were reported not improved. No serious complications resulted from the therapy. Physical health was improved in most cases. It will be interesting to follow further use of this type of therapy over a more extensive series of cases in order to confirm these promising results.

R. C. BUCK

THE RH FACTOR IN OBSTETRICS
By Jacob Halperin, M.D., F.A.C.S.,
Mendel Jacobi, M.D., F.A.C.P. and
Alvin Dubin, B.A., Brooklyn, N.Y.
Am. J. Ob. and Gyn., Vol. 50, No. 3

Realizing the important relationship of the Rh factor to erythroblastosis and to most intra-group transfusion reactions in pregnant or recently delivered women, this group of workers presents its appraisal of the value of routine prenatal determination of the Rh factor. The paper includes statistical data and analyses of the histories of 3,885 women delivered in Beth-El hospital, and of the records compiled by Dr. Silik Polayes, attending pathologist of Cumberland Hospital, Brooklyn, of 103 cases with clinical or autopsy diagnosis of erythroblastosis.

The investigations revealed that the male fetus is more susceptible to erythroblastosis than the female (3:1 and in fatal cases 5:1), i.e., the chances of recovery are greater in the female. Erythroblastosis was taken to include moderate anemia, icterus gravis, icterus hemolyticus, erythroblastosis fetalis and hydrops fetalis.

Two instances of severe transfusion reactions resulted in the routine typing and determination of the Rh factor in all women attending prenatal clinic. Of 500 consecutive patients, 66 were found to be Rh negative, an incidence of 13.2 per cent. Thirty-five of these mothers were delivered at the time of writing and 65.7 per cent of their infants showed some form of erythroblastosis. The anticipation of this high incidence is thought by the authors to be invaluable in the institution of early adequate treatment. This includes:

1. Blood smear stat to determine the number of nucleated red blood cells. A count of 10 should put one on guard.
2. Daily blood count for next few days. A fall in the count, or anemia at the first count calls for immediate transfusion before too much liver and brain damage can occur.

In the light of the known facts concerning its importance for the mother, should she require a transfusion, and for the baby, should the mother prove to be Rh negative, it is suggested that the Rh factor determination be made mandatory like the Wasserman test.

B. N. Corrin

“COURAGE AND DEVOTION BEYOND THE CALL OF DUTY”

Through the co-operation of Mead Johnston & Company, $34,000 in War Bonds are being offered to physician-artists (both in civilian and in military service) for art works best illustrating the above title.

This contest is open to members of the American Physicians Art Association. For full details, write Dr. F. H. Redewill, Secretary, Flood Building, San Francisco, Cal.
THE B. T. McGHIE MEMORIAL LECTURESHP

Dr. B. T. McGhie, the Deputy Minister of Health for Ontario, died on January 20, 1945. His death deprived the people of Ontario of one whose only ambition was to improve the health of the people, and his life was devoted to this objective. In spite of the difficulties of the depression years and the war years, Dr. McGhie laboured unceasingly. Much of the advanced health legislation in Ontario is due to his vision and effort. Some of his lasting achievements are the reduction in the incidence of tuberculosis, the inauguration of mental health clinics, better care of the mentally ill, compulsory pasteurization of milk, the development of county health units, more public health laboratories, improvement of facilities for cancer control and venereal disease control. He constantly encouraged medical education in its public health aspects and in the broadest integration of general medicine with psychological medicine.

Before becoming Deputy Minister of Health, he had been for a time Superintendent of the Westminster Military Hospital and at that time was a member of the teaching staff of the Faculty of Medicine of the University of Western Ontario.

Because of their great admiration for his achievements and their warm appreciation of his friendship, a number of his friends decided to keep his memory green by the establishment of a lectureship, whereby at intervals an outstanding scientist in the field of social and psychosomatic medicine could be brought to the University of Western Ontario to deliver a lecture and conduct a clinic.

On January 18, 1946, approximately one year after Dr. McGhie's death, the first lecture was delivered by Dr. E. A. Strecker, Professor of Psychiatry at the University of Pennsylvania. He spoke on the subject "Motherhood and Momism—Effect on the Nation." A crowded auditorium greeted Dr. Strecker and the afternoon clinic was also very well attended and greatly appreciated. Dr. Strecker is well known to all students in medicine through his textbooks and other contributions to the literature. He served in World War I as a divisional psychiatrist.
in the American Army and was the Secretary of War's civilian consultant to the Surgeons General of the Army, Navy and Air Force in World War II. Dr. Strecker has received honorary degrees from several Universities for his great contributions in the field of mental medicine. He has also served as President of the American Psychiatric Association and the American Board of Psychiatry and Neurology.

At the conclusion of the lecture, Dr. A. G. McGhie of Hamilton, a brother of the late Dr. B. T. McGhie, expressed appreciation to the speaker for his address and to the friends of his brother who had made the lectureship possible.

—G. H. STEVENSON, M.D.
CAMPUS SHADOWS
By H. W. Trott
(Crosset and Williams, New York, 1944. 371 pp., $2.75)

"Campus Shadows" is another "life of a doctor" book—a book that most doctors of medicine dream of writing some day. Dr. Trott's early life on the farm is followed by a year at the medical school of McGill University. After this, he spent a profitable interlude of two years at Western. In the chapters dealing with life at Western, he describes many amusing incidents such as the still-popular dissecting room battles with viscera.

The book is written for the layman, but is infinitely more appreciated by a student or doctor of medicine.

Dr. Trott did not finish his course at Western but graduated from McGill University.

The latter part of the book deals with his early years of practice and his reflections on medical ethics at that time.

Dr. Trott is a lucid, precise and sometimes humorous raconteur. The chief interest in this book lies in the fact that it was written by a former Western student.

—W. J. WALSH

MEN UNDER STRESS
By Lt.-Col. R. Grinker, M.C., and Major John P. Spiegel, M.C., A.A.F.
(The Blakeston Co., Toronto, 1945. 484 pp. $6.00)

"Men Under Stress" is a practical clinical book on psychiatry. Although its field is limited to the war neuroses of the combat group of the Air Force, much of it is applicable to the neuroses found in any phase of life.
The opening chapters have been devoted to a discussion of factors which may be of insignificance in the understanding of a neurosis. Among such factors are the motivations of the airman to fly, his past environment and the environment of the combat group. This discussion is followed by a description of the specific reactions to combat as found in air personnel, together with an explanation of the psychodynamics of the reactions.

The type of treatment given to a developing neurosis depends upon whether the man concerned is in combat or has been returned home. Overseas, every effort is made to keep a neurosis from becoming incapacitating so that the flier may be maintained in combat. At home, an effort is made to uncover the cause of the neurosis and then to help the individual to build up a defense against it.

Throughout their book, it has been the plan of the authors to illustrate each phase of their topic with several case histories which not only gives interest but leads to a better understanding of the subject discussed.

In my estimation, this is a well organized, informative, and, one might add, entertaining book.

—LILLIAN FULLER

DOCTORS AT WAR
Edited By MORRIS FISHBEIN, M.D.
(E. P. Dutton and Company, Inc., New York, 1945, 398 pp. 82 illustrations. $6.50)

A documentary record of the American Medical profession in World War II, this book has as its contributors a galaxy of great names in American War Medicine. The various sections, sixteen in all, have each been written by the very best informed and authoritative authors possible. For instance, the chapter “The Army Doctor in Action” has been written by Major General Norman T. Kink, the Surgeon-General, United States Army. The section on the Red Cross has been compiled by G. Canby Robinson, M.D., S.C.D., National Director of the Red Cross Blood Donor Service.

Of particular interest to Western readers is the chapter on the “Medical Side of Selective Service” which has been written by our own eminent graduate, Colonel Leonard G. Rowntree, Chief of the Medical Division, Selective Service System.

This book should prove to be of interest to doctor and layman alike. It presents an accurate, realistic and glowing picture of the mag-
Significant part played by the medical profession in preliminary organization and training on the battle field, in aviation and naval medicine, in the great strides taken in convalescent and rehabilitation treatment, in public health and preventive medicine and in research work. It presents its problems, its difficulties, its mistakes and its triumphs in the light in which they appeared to those who shouldered the responsibilities.

It is to be hoped that the British and Canadian Medical Services will follow this example and produce a history of their own part in the war. Dr. Fishbein, in his book, has set for them a very high standard to follow.

—Cameron Wallace