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**ESSAYS.**

**ART. 1.**—*Remarks on the Injuries resulting from Confinement of the Chest by Dress.* By N. R. SMITH, M. D.

IN January last, the body of a young female, an unfortunate victim of vice, was brought into the anatomical hall of Jefferson College, for dissection. On exposing the chest, a remarkable deformity presented itself, occasioned by distortion of the breast bone. About two inches from the top of the sternum, where the first piece of that bone joins the second, was an indentation nearly an inch in depth, immediately above which the bone abruptly protruded, so as to form an obvious tumor between the breasts. The ribs, also, attached to the protuberant piece of the sternum, were of course more arched than those below, giving to the whole upper part of the chest a more free expansion than belonged to the lower. The pit in the sternum was precisely where the extremity of the busk, or corset board, is usually worn. This, together with the confined aspect of the lower part of the chest, instantly suggested, to every one who saw it, the cause, which unquestionably was the wearing of the tightly laced corset before the form of the individual had been fully developed.

On examining the contents of the thorax, the capacity of which had thus been encroached upon, it was found that the subject had been the victim of pulmonary consumption, one of the most important predisposing causes of which, we know, to be a confined chest. It cannot be doubted, therefore, that the fatal disease, in this instance, had been aggravated, and might have been provoked, by the habit of dress.

The above instance of artificial malconformation, will by no means appear incredible to those who know how susceptible is the human form, in early life, of being moulded to almost any configuration, and that without the infliction of much pain upon the individual. Even the shape of the head, the most rigid part of our bodies, is, in some parts of the world, brought under the plastic dominion of fashion. We have the fashion of flat heads on the rocky mountains—round heads among the turbaned Turks, and long heads among the Macrocephali. Indeed, there is scarcely any part of the form that fastidious man has not attempted to amend, as if believing that nature's journeymen had made us, and not made us well. I know not which would appear the most ridiculous in the eyes of the other, the wasp-waisted lady of our own country, or the Chinese belle, with a foot no bigger than a Mandarin's thumb; nor do I know which would most offend the unsophisticated eye of nature; but this I know, that the deformity of the latter is unimportant in regard to health, while that of the former is acquired at the expense of vital organs, which may not be encroached upon with impunity.

If, as I believe, and shall endeavour to show, the confinement of the chest, practised by females in fashionable life, is one of the most frequent of the remote causes of disease, certainly it is a subject worthy of our particular attention. To prevent is obviously better than to remedy diseases, though perhaps less profitable to our fraternity.

It is a fact, although perhaps not generally observed, that, in females, the free motions of the chest are much more important, in relation to the function of respiration, than they are in males. It is obvious that in the former the chest is comparatively nar-

row, and the expansion of the diaphragm less than in males; hence it follows that this muscle must necessarily exert less influence in expanding the chest for the inhalation of air. The mechanism of the ribs, however, is admirably calculated to supply the deficiency. Their obliquity, with respect to the spine, is much greater than in the male; the cartilages are more flexible, and indeed the whole structure of the thorax is more elastic and mobile.

The final cause of this peculiarity of mechanism is obvious.— During the period of gestation, and especially in the latter months, the increased volume of the abdominal contents impedes the descent of the diaphragm, and renders it more necessary than in the male that the lateral and antero-posterior diameters should be increased by the compound motion of the ribs. From the above observations it follows that any article of dress which constricts in any considerable degree the chest, must be infinitely more productive of mischief to the female than to the male, and for two reasons: First, it must restrain motions which are far more necessary to the function of respiration; and, secondly, the female chest has far less rigidity to resist the injurious pressure.

Whenever the female chest is confined, it necessarily results that the diaphragm is called into increased and preternatural exercise. The diaphragm is antagonized by the muscles forming the anterior walls of the abdomen, and hence the motions of inspiration and expiration alternate between these organs. The abdominal viscera become injuriously compressed, and although the natural and easy motions of respiration are salutary to these organs, yet the unnatural efforts of the diaphragm must injuriously encroach upon the region of the stomach, liver and spleen, with all which it is in contact below. This effect will be the greater, because these viscera are embraced by the cartilages of the ribs, and must suffer also from lateral pressure. All these organs must be urged lower into the abdomen, and not only this, but the more moveable viscera are pressed into the pelvis,

and interfere with the contents of that cavity, producing mischiefs which we shall presently name.

Females are exceedingly incredulous in regard to the injuries resulting from incarceration of the chest, because the corset, after having been worn for a considerable time, not only ceases to give any sensible inconvenience, but seems necessary to their comfort as a support to the body. This, however, only renders the mischief insidious. We very well know that by *habit* the body may be so inured to almost any restraint as to become unconscious of its presence; but if it be persevered in, the injurious effects, sooner or later, result. Those Chinese females whose feet are ruined by early and tight bandaging, do not experience much pain from the confinement; nor is that degree of compression, which even moulds the shape of the head, borne with impatience. All admit, however, that the corset, when first worn, causes much uneasiness, and young girls are often very refractory in regard to this part of their physical education.

The injuries which result to the constitution from long continued compression of the thorax, are manifold. The first and most obvious is impeded respiration. This must necessarily follow from what we have observed above, of the mechanism of the female chest. Not only are the motions of the thorax restrained, but the capacity of the lungs for air is encroached upon; the blood circulating through these organs is retarded, and its change, effected by the atmosphere, ceases to be complete. The lungs become engorged, and are thus provoked to whatever disease the idiosyncrasy of the patient, or peculiarity of climate, may predispose. With us, the disease which will most frequently be developed, and perhaps originally caused, is tuberculous consumption. Inflammatory affections of the lungs and appendages, as bronchitis, peripneumony and pleurisy, will be encouraged. Diseases of the heart and circulatory organs are also in the train of its effects. It has been ascertained, by the experiments of Barry and others, that the alternate expansion and collapse of the chest, are almost as necessary to a free cir-

ulation of blood, as to healthy respiration. Whatever restrains them will cause an accumulation of blood in the ascending cava and the portal system of the abdomen. The mechanical pressure also operates immediately upon the heart, restraining its natural diastole, or expansion for the reception of blood. The frequent occurrence of fainting, in females fashionably attired, especially when breathing the impure air of crowded rooms, and when the circulation is hurried by exercise, are proofs of the justness of our observations. Whenever this occurs in the presence of an honest matron, acquainted with the mysteries of the modern toilet, she immediately applies herself with scissors, tooth and nail, to the lacings of the corset, and with all the eagerness with which one would cut the rope of a suicide.

Palpitation of the heart also results from any cause which, restraining the natural action of the organ, compels it to struggle in the performance of its office. All that numerous and varied train of affections which spring from impeded circulation, are its secondary results.

I have already hinted at the injuries that may be inflicted upon some of those organs concerned in the function of digestion. The stomach is not only displaced, but is irritated, by the mechanical pressure. Its motions, so essential to the integrity of its functions, are confined, and the circulation of its blood is obstructed. Nearly the same is true in regard to the liver and spleen. The rest of the abdominal viscera are also confined, or displaced, in a degree that can not be regarded as innoxious.

But some of the most deplorable effects resulting from this absurd practice, and which are often productive of infinite misery and protracted suffering to females, are prolapsus uteri and leucorrhœa. That they must result from the descent of the abdominal viscera into the pelvis; and obstructed circulation, is sufficiently obvious. The record of fashion's infirmary will also substantiate our assertion. I have been informed by an eminent physician, who has practised extensively both in town and country, that these distressing affections are four times more frequent in the former; and to no cause, of the many which un-

doubtedly concur, does he ascribe more influence than to the follies of dress.

The degree of injury inflicted by the corset upon the female form, undoubtedly, in some degree, depends upon the period of life at which it is assumed. Before the figure is fully developed, its contour may be influenced by the slightest restraint. This was undoubtedly the case in the instance with which I introduced this subject.

The argument, however, which of all others may, perhaps, with females, be most effectually employed against the use of this procrustean girdle, is the fact that, besides its less direct influence, in substituting the pale ensign of disease for the "crimson of their lips and of their cheeks," it often spoils the symmetry of the form. It is a capricious fashion which admires a preternaturally small waist in the female figure; the proportion that nature has assigned it is that which alone pleases the taste capable of appreciating the truly beautiful. But the confinement of the chest also produces a remarkable protuberance of the abdomen, which certainly none can admire, except in those ladies who give evidence that they "love their lords." We have already observed that when the respiratory motions of the chest are restrained, they are communicated to the muscles of the abdomen. This is especially obvious when breathing is hurried by exercise or animated speaking. I have seen a fair actress upon the stage so begirt with whalebone and steel, that in impassioned utterance, when the tide of the bosom should speak the emotion of the heart, there was substituted for it an unseemly anhelitus of the abdomen, the chest being fixed like a bust of marble. Surely females would not willingly, for that which is so graceless, sacrifice a charm that has set so many poets raving. 'Tis plain that Haidee could never have worn a corset, or the poet could not with truth have thus sung her graces:

"She wore two jelicks—one was of pale yellow;  
Of azure, pink, and white was her chemise,  
'Neath which her breast heaved like a little billow."

I could adduce cases which have fallen under my own observation, illustrative of the evils of this too frequent cause of dis-

ease and deformity, but perhaps we have said enough to convince our professional brethren of the importance of overlooking nothing in which may lurk the embryon cause of disease and death, whether it be a tight neck-cloth, a laced corset, a dish of ill prepared food, the subtle principle of contagion, or the desolating breath of the simoom. Let nothing which is hostile to health and life be deemed unworthy the attention of their protectors. In conclusion, however, I would state, that my friend Dr. Eberle has recently mentioned to me a case in which the breasts of a female were ruined for the nursing of the infant, from the nipple having been so buried in the gland; by the pressure of the corset, as that it could not be drawn by the child. Another case he has also related, in which the use of this article of dress, during the latter months of gestation, proved fatal to both mother and child. The latter, when born, manifested, in the very form of its body, that it had been forcibly compressed.

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ART. II.—*Observations on the Pathology and Treatment of Necrosis.* By NATHAN SMITH, M.D., Professor of Surgery in Yale College.

THE etymological definition of Necrosis is, the *death* of some part of the bony structure; as technically employed, in medicine and surgery, however, it designates a particular form of disease, characterized by peculiar symptoms, and often, generally indeed, terminating in the death of a portion of the bone in which it is located. We may perhaps question the propriety of the above appellation, if it be made to appear, as I shall attempt, that the death of the part affected is not the *necessary* sequel of the disease, although the most frequent. It is the same inconsistency of language that obtains in the application of the term hydrocephalus to those inflammatory affections of the meninges of the brain, which sometimes terminate in dropsy of that organ.

This disease was formerly known in New England under the name of *fever-sore*, given to it, undoubtedly, because it is generally accompanied, from the very commencement, with a high de-