

AN  
INAUGURAL DISSERTATION  
ON

*The Subject of Reconstruction*

SUBMITTED TO THE

President, Board of Trustees, and Medical Faculty

OF THE

UNIVERSITY OF NASHVILLE,

FOR THE DEGREE OF

DOCTOR OF MEDICINE.

BY

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OF

*Texas*

1859

MEDICAL JOURNAL OFFICE,  
NASHVILLE.

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This Thesis is respectfully dedicated.

By The Author

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Since many of the diseases peculiar to the female that it will become the duty of the "Practitioner of medicine to treat" will naturally be associated with a deranged condition of the function of menstruation; either as the cause or result of that derangement: And as it is a subject that has attracted the attention of the "Medical Profession" since the days of the great "Fathers of Medicine" to the present moment: And since the very permanency of the human race itself depends upon the regular and healthy performance of the important function of "menstruation" It can but now form a subject worthy of the close contemplation of the Medical Student.

That Menstruation is a function peculiar to the human female is now I believe acknowledged by the "Greatest authorities": notwithstanding we have been told by the "most splendid Physiologist" that it has been noticed as occurring in some of the inferior animals.

- the Monkey for instance. But it has not been sufficiently well established to be admitted as a physiological function belonging to those inferior creatures.

Menstruation may then be defined - to be a sanguinous discharge from the genitalia of the "Human Female" - occurring at the age of Puberty - and indicating that degree of development requisite for the important function of reproduction. It is at the age of Puberty in the female that we observe every marked and every important change in her moral, physical and intellectual condition. The Bones of the Pelvis become now more widely expanded and more consolidated - the basin "as it were" becomes more ample - the bones are more firmly united together - that they may better undergo the pains and fatigues & expanding force of labour. Her areolar tissues become more developed - so as to give rotundity - symmetry and beauty to her form - the Mammae are now more considerably enlarged - This period may then with much propriety, be said to be the period of the most perfect beauty of which the female is susceptible.

It is a period in which as before remarked the moral are not less marked than the physical changes. In fact it is a period replete with interest to the young female - It is often termed "the critical period" She is almost created a new being! She has hereafter a new function to perform. And upon the due performance of that function depend her future beauty and health.

The Catamenia usually makes its first appearance preceded by marked diagnostic symptoms indicating its approach - being more marked in those who have been brought up in the lap of luxury and indolence and consequently of a more nervous and irritable temperament - Some days previous to the first eruption of the menses: the individual generally experiences a sense of fullness in the vessels of the head & more or less headache - Swelling of the breasts pain weight and dragging sensation in the loins and in the regions of the uterus - with a skin more or less hot and a pulse somewhat accelerated. These

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Symptoms are always of greater or less severity and danger according to constitution and previous habit of the individual. And, very often a great variety of nervous symptoms precede the eruption of the menses—such as ringing in ears a sense of suffocation & palpitations of the heart—whimsical notions and deranged appetite &c. These symptoms may all disappear without any appreciable flow of the menses to return again in a short time and complete the discharge. Subsequent menstrual periods are not as a rule preceded by symptoms so severe as the first. But during the existence of the menstrual flow the system of the individual is always in a more irritable condition than at other times. So that exposure to cold and every kind of mental and corporeal agitation should be strenuously guarded against—least the process may be impeded and troublesome affections supervene. That the menstrual fluid is a true exhalation from the lining membrane of the uterus is evident from the changes observed in

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taking place in that membrane during and a short time previous to the flow of the menses. And we are told "that an injection sent into the arteries of the uterus readily transude through the lining membrane." - "And beside the appearance in the uterus of the catarrhical fluid - and its suppression when the uterus is in a pathological condition is strong proof of the truth and ground of assertion. But many discussions have arose and yet arise" in the Profession, as to: whether the Menstrual fluid be a mere hemorrhage produced by rupture of the minute capillary bloodvessels of the internal membrane of the uterus; or a secretion from that membrane; or either side of the question we have the most splendid talent of the "Medical Profession" arrayed, "Dr. Dewees" in his "treatise on the diseases of females" says that he "adopts the opinion that the Menstrual fluid is a genuine secretion; and that it is every different in its nature and composition from true blood." In the first place; its colour is between arterial and venal blood - being less brilliant than the

former: more fluid than the latter. 2<sup>nd</sup> It never separates  
 into parts. While blood drawn from the body does in  
 a longer or shorter time separate into parts. 3<sup>rd</sup> It never  
 coagulates though kept for years. 4<sup>th</sup> The odor is very  
 different from that of other blood and less disposed to  
 putrefaction. He therefore considers "the menstrual  
 fluid to differ from the blood of circulating mass  
 in at least two remarkable properties - viz. In not coagu-  
 lating; and in not separating into parts." But there  
 are other authorities perhaps equally as good - who enter-  
 tain the opinion that the menstrual fluid is true  
 blood, differing in no respect from the blood of the  
 circulating mass. The analysis of healthy human  
 blood: by "Dun" gives water 784, Red corpuscles 131. Albu-  
 men 70. Lymph and other matters 12, Fibrene 2.5<sup>th</sup>. And  
 the analysis of the menstrual fluid as given by the  
 same individual "water 825; while the other constituents  
 as Globules: Albumen: extractive matter fatty matters  
 Salts &c. - amounted 175<sup>th</sup>" so that the solid constituents  
 of blood is but little more than that of menstrual fluid.



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"Perhaps" says Stouff "The menstrual fluid obtained a part of its watery constituents, in its passage from the uterus to the external orifice - so far there fore as most analyses go to show - there is much resemblance between the "menstrual fluid" and true blood, Donne indeed affirms "that there appears to him to be no difference whatever in the analysis of the two fluids" Keilner adopts the modern view in reference to the "menstrual discharge", "that it is true blood discharged by the rupture of vessels of the lining membrane of the uterus, but rendered uncoagulable by becoming mixed with the acid mucus and epithelial cells of the vagina" The peculiar odor characteristic of the catamenial fluid has been attributed to its subsequent admixture with the utero vaginal secretions - But there are told on the other hand "that in case of occasional menstruation from the scalp - the peculiar odor was distinctly mixed" - In a microscopic examination of the fluid (in question) by Donne "was found an abundance of red corpuscles: to which he attributes the colour of

the discharge, and we are told "that it is impossible for blood to be secreted" so if this be true and blood disk are found in the menstrual discharge - they can but be the result of hemorrhage - But the question after all is not of any very great importance, we know that prior to and during the whole period of the menstrual flow the lining membrane is in a state of erythema and doubtless the seat of increased and modified secretion.

The efficient cause of menstruation is a subject that has in former times admitted of ample room for many theories and discussions. Lunar influence has long been invoked as an efficient cause; upon the ground that the periodical return of the menses corresponds to with the revolution of the moon around the earth: But should this doctrine of Lunar influence be established - we would be remarked by one "respect every twenty eight days - what might be termed a general "blood tide" "all women menstruating at one and the same time" But we are assured that in different parts of the land and even

in the same immediate meridian: there are women  
 menstruating every day for days Kings "there is perhaps  
 not an hour in any day in which some women are  
 not at the beginning; middle and end of their term.  
 And since some women menstruate oftener than every  
 twenty eight days and others not oftener than  
 every thirty five or more days: this notion of Lunar  
 influence that has for ages so deeply impressed the  
 public mind is now either entirely abandoned by the  
 "profession" or is fast giving place to more plausible  
 and easier supported theories. The doctrine of  
 "General Plethora" has also been invoked - upon the  
 ground of this theory - that during the whole of  
 the growing period from birth to puberty - there is  
 required a greater quantity of blood to support  
 not only the life of the various tissues of and  
 organs of the body - but also their growth - so that  
 when she arrives at this period of puberty - all  
 her important organs are complete and no longer  
 require that surplus of life material - which from

habit continues to be formed & must find an outlet.  
 And the liability of females to become pregnant  
 after this period - make it necessary for that sur-  
 plus of blood to continue being formed, so that when  
 this is not expended in pregnancy or lactation it seeks  
 an outlet through the menses. But this doctrine has  
 ever met with opposition - For an observer that women  
 do sometimes menstruate who are very anæmic, and  
 if it be only to eliminate that escape of blood, it would  
 appear to my mind evident that to take blood  
 from the arm or any other part of the organism,  
 would supersede the necessity then of menstruation.  
 But such is not the fact according to the best  
 "authorities": "For" says one "If we take fifteen or even  
 twenty or more ounces of blood from the arm of  
 an individual every one, two, or three, days previous  
 to the time for the periodical return of the menses;  
 will not prevent its return at that time," various  
 menstruations taking place as it may from the scalp  
 the nose; the tongue &c. has been called in to supply

out this doctrine of general Pithora.

The doctrine taught by the greater number of Physiologists of the present day: "Is that at each Menstrual epoch" There is a rupture of a Graafian vesicle and a discharge of an ovum; producing a peculiar irritation of the "ovaris"; which irritation is extended through Sympathy to the lining membrane of the uterus producing engorgement of its bloodvessels to the point of rupture and discharge of the fluid in question. The post mortem examination of the ovaries of women; who have committed suicide or been suddenly killed by accident during the flow of the menses afford evidence of a rupture of Graafian vesicle and of a small irregular cicatrix in the coats of an ovum. Says Kaciboski "There exists: in the first place: the most intimate connection between the Graafian vesicles; and menstruation. When these vesicles arrive at their full development; menstruation begins; and when they are destroyed; menstruation ceases." He asserts. "that the discharge of the fluid are but a Secondary phenomenon in menstruation called

and that the capital and all important phenomenon is the maturation and discharge of an ovum. Menstruation has been defined by one "to be a periodical ovulation and discharge of an ovum; And that menstruation is entirely dependant upon a state of integrity of one or both ovaries is now a doctrine almost established beyond a single doubt. For says Dr Dewees - "The uterus will not be subject to the menstrual action until the surface which furnishes the fluid is perfect in its arrangements. And not then unless it receive the peculiar stimulus given by: or it sympathize with a perfect ovarium or ovaries." And from what we learn by experiment or from accident: It is certain that menstruation is forever prevented by the castration or destruction of the ovaries - Consequently this important action of menstruation must be (as before said) entirely dependant for its existence upon a state of integrity of these bodies.

It is also maintained: that a period of menstruation is the period of the greatest aptitude for conception - and that it is greater immediately after the cessation of the flow: has been maintained since the days of Hippocrates.

Dr. Carpenter contends that conception often takes place just before the last appearance of the flow. And he says "there is good reason for the belief that the sexual feelings become stronger at the 'menstrual epoch'." Hence the excitement together with the escape of an ovum establishes an afflux of fluids to the organs and engorgement of the delicate vessels to the point of giving exit of the discharge. And it is contended by every "learned authority" that a woman is only capable of being fecundated within some unknown but short and limited time after her menstrual period. Mr. Pouchet says "that the period after menstruation during which the discharged ovum remains capable of being fecundated does not extend beyond the twelfth day." But according to the laws of germinative changes this period must certainly extend beyond the eighth day and may just as reasonably extend beyond the twelfth, notwithstanding an ovum may and often does escape at intermediate periods without making any show and in such cases may be fecundated. But why? The escape of an ovum becomes varied

every twenty eight days periodically by a sanguinous discharge from the genitalia of the female and at no other time when she is in a healthy condition: is a question about which as little is known or perhaps left than there is an opinion to the periodical return of Intermittent fever or of the Paroxysm in those labouring under the disease - Intermittent Fever.

About what age of the individual ~~is~~ the Menstruation usually makes its first appearance: is a question that like many others in Physiology has admitted of great differences of opinions among the best authorities. The time though varies according to the varying condition of the individual - It has been esteemed as a general rule: the warmer the climate - the earlier the discharge of the menses makes its appearance: but this is not invariably true - The period in this country is between the age of thirteen and fourteen - Those brought in large cities and in luxury and in the indulgence of all their desires: generally menstruate sooner than those brought up in the country and accustomed to privations



of various kinds. Though in various parts of the earth we are furnished with examples of wide differences of between the earliest and the latest period of the very first appearance of the menses. For instance we are told that some individuals have been known to menstruate as early and some even earlier than the eighth year of their age. While on the other hand some have never menstruated before the twenty fifth or thirtieth year of their age. The age at which it usually makes its first appearance in England as given by most of the authorities of that country is about the fourteenth or fifteenth year.

The mean duration of each menstrual flow varies from three to five days or even at the farthest in a healthy and normal menstruation. And the quantity of fluid discharged at each period varies greatly according to the individual and according to climate. The average amount though is from six to eight ounces, yet it in some much less than that amounting to not more than three or four ounces while in some others it has amounted to as much as twenty ounces.

without affecting in the least the health of the individual - Though notwithstanding the statements upon this subject - an estimate of the exact amount discharged at each period is very difficult indeed to arrive at - Since few experiments have ever been made upon this subject - it being of so very delicate a nature - and so embarrassing to one questioned in reference to this function -

It has ever been supposed that a regularity in the return of the Catamenia and the elimination of a proper quantity and that of a healthy nature - would be every strong evidence of a capacity for becoming impregnated - Since says one "The menstrual discharge commences only when the female is in a condition to meet and to overcome the ordinary contingencies of impregnation and delivery - But this is not by any means an infallible sign of fertility - as we are furnished with many examples directly to the contrary - the cause of such sterility in those apparently healthy in the performance of all their functions has often been

attributed to different conditions - Not necessary here to be mentioned -

About the age of "forty five or fifty" the menses usually cease and with their cessation the power of reproduction ceases. As the Catamensia approach that period of final cessation its periodical recurrence becomes more and more irregular - So that instead of appearing every twenty eight days - may appear as early as every two or three weeks for a while or may not appear oftener than every six weeks - the quantity and quality also become more and more irregular until the final cessation. This period of final cessation is not less a period of interest and of danger to the female than the period of first occurrence - Since a collection of organs that have been for thirty years concerned in the production of germs and in the performance of the great function of menstruation can not wholly leave off the performance of these functions upon which for so many years the health of the individual depended without

danger to the health and perhaps to the life of  
 the <sup>individual</sup> - since it is at this period that the Breast and  
 the Uterus take on so often malignant disease - which  
 always tends towards death.

In ancient times many superstitions existed  
 as to the peculiar blighting influence possessed by the  
 female while performing this important function.  
 But all these have disappeared under the <sup>enlightened</sup> ~~enlightened~~  
 light by modern Physiologists thrown upon the sub-  
 ject. So that the woman once considered "instru-  
 mentally deleterious" while menstruating is now but  
 considered as in the healthy performance of a  
 natural function.