Passing practically all the urine through the urethra, a few drops coming through the wound. 24th. Wound healed. Patient apparently quite well.

ON THE ALLEGED DIFFERENCE BETWEEN MALE AND FEMALE RESPIRATORY MOVEMENTS.

Notes of a Communication made in the Section of Anatomy and Physiology at the Annual Meeting of the British Medical Association, held in Birmingham, July, 1890.

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ABOUT fifty cases were represented by stethographic tracings exhibited to the Section. The instrument used was that of Burdon Sanderson, mostly in its original form; but the following modification of that instrument had in the author's hands lately afforded a great increase of convenience. He had clamped on to a massive camera-stand the limb of the stethograph which held the button and tambour for receiving the respiratory impulse, and had thus utilised the facility of adjustment to the thorax or abdomen, which the several movements of the camera stand afforded. At the same time, he had obtained, by means of a firm upright spinal rest, the requisite fixity of the trunk posteriorly.

which these tracings were obtained were all, with a view to greater precision, chosen in the mesial line anteriorly, and at the following levels, namely: (1) over the sternum in the line of the second chondro-sternal articulation; (2) over the liver below the ensiform cartilage; (3) just above and clear of the umbilicus; (4) just below and clear of the umbilicus; (5) (in many cases) midway between the umbilicus and pubes. Between the abdominal wall and the button of the stethograph there was in later experiments interposed a small curved plate of horn or a card in order to afford a firm surface. The dress was entirely loosened.

To keep the subject of experiment wholly ignorant, if possible, of the object of the process was regarded as especially important. A small group of tracings produced, illustrated the great alteration produced in the respiratory curve when the subject had unfortunately learned too much, and become conscious of the breathing process. Except to illustrate this point, such tracings were, of course, useless. In several cases the results were checked by taking second or third tracings at later dates. Adopting these precautions, it was not thought essential to take tracings at several levels simultaneously.

Certain general results belonging to nearly all the cases, whether of men or women, are as follows: (1) At the sternal level, there is shown in both sexes free respiratory movement. That there should not appear a comparatively greater sternal movement in females does not quite accord with the impression which observation without the stethograph of women in their usual dress would have sug-

gested. The author had not observed whether, as is possible, this movement is diminished in women when the dress is loosened for stethographic experiment, and thus fairly equalised it with the sternal movement in men. (2) Over the liver, there was constantly

It was plain that to speak of "thoracic" or "abdominal" respiration without further definition was extremely inexact; yet he had been unable to discover that any precise definition had been hitherto adopted. The points on the thorax or abdomen from

free and very regular movement in both sexes, the solid mass of this organ apparently communicating the movement of the diaphragm. (3) Just above the umbilicus, the results were very variable, and appeared to be influenced largely by the varying size of the liver and by varying degrees of abdominal plethora or slowness. (5) Midway between the umbilicus and pubes varying results are exhibited; in many cases, whether male or female, but little respiratory movement appears.

Then (4) just below the umbilicus. At this, as if at a mean abdominal level, there occur the most characteristic differences in regard to abdominal breathing, and it appears to furnish the most advantageous level for comparison. Thus the following groups may be distinguished among the present tracings.

1. Cases of men. A principal group shows free movement below the umbilicus (see illustration M.), whilst a smaller group of men, mostly having soft abdominal walls or contents, have only slight, although distinct, movement at the same level.

2. Cases of women dressed and corseted in the usual manner, a large group showing in regard to movement below the umbilicus that it is diminished considerably, or excessively, or nearly abolished (see illustration W_a). In a much smaller group of corset-wearers, young and muscular women, free movement is retained.

W_b.

3. Cases of women habitually wearing no corset—a large group showing free movement below the umbilicus, in no degree less marked than in men. (See illustration W_b.) In the particular case from which this illustration was taken it occurred that the respiratory movements were actually freer than in most males. A small group (two cases) of women habitually non-corseted, but

having slight soft abdominal walls or contents, shows only slight movement.¹

Certain miscellaneous collateral points illustrated were the curves produced by coughing, yawning, deep breathing, hicough, an attack of hysterical gasping; a minute vibration (probably muscular) obtained, for instance, over the hips; in aged persons diminished respiratory movements in all situations; in some young persons, and especially in children, secondary, persistent, jerky, undulations of the respiratory curve, probably of muscular origin.

The author submitted in conclusion, pending further observations, that the tracings exhibited tended to invalidate the routine physiological teaching that there is a natural difference in the respiratory movements of the sexes, and they tended to confirm the belief of Sibson that the alleged difference is chiefly or wholly due to the effects of woman's conventional dress.

The PRESIDENT (Professor Cunningham) was very pleased to find that physiological experiment confirmed the views which he had formed on anatomical grounds, that there ought to be no essential difference in the respiratory movements in the man and the woman.—Professor ALLEN thanked Dr. Wilberforce Smith for the interesting results which he had placed before the Section. These results agreed entirely with his preconceived ideas, for he could not understand what advantage could accrue to the woman through a different manner of breathing from that of the man, except during the latter period of gestation. It must be remembered that even when no corset was worn, a woman still suspended about half her clothing from the waist, and the mere contact of the waistband would suffice to render it more irksome to breathe with the abdominal muscles. If the female embarrassed her abdominal movements, the male, on the other hand, limited his chest movements by suspending all his clothing from the shoulders. The best method would seem to be to suspend half the clothing from the pelvis, not the waist, by means of a light but stiffened frame, which should rest on the pelvis after the manner of a milkman's yoke, reaching from the back as far forward as the anterior superior spines of the ilia, with a yielding portion in front, so as to allow perfectly free movement of the muscular walls of the abdomen. This apparatus need not cause any prominence of the clothes; or, even if of exaggerated size, would be much less disfiguring than a dress-improver.

MEMORANDA:

MEDICAL, SURGICAL, OBSTETRICAL, THERAPEUTICAL, PATHOLOGICAL, Etc.

VAGINAL HYSTERECTOMY.

IN the BRITISH MEDICAL JOURNAL of October 4th, under the heading of Medical News, you state that Dr. William Duncan, on September 22nd, performed vaginal extirpation of the uterus for primary cancer of the uterine body in a patient aged 57, who has since recovered without an unfavourable symptom. In consequence of this announcement, I venture to inform you, believing it will be of interest to your readers, that on September 6th I removed the entire uterus at St. Bartholomew's Hospital for cancer of the cervical portion, and that the patient was discharged on September 30th, never having had a bad symptom.

When I commenced the operation, I had no intention of doing more than a supravaginal amputation of the cervix at the level of the internal os uteri. The disease reached so far back in the posterior lip that Douglas's pouch was opened to such an extent that, after the supravaginal amputation was effected, the fundus uteri protruded through the opening, and it occurred to me at once that the removal of the entire uterus was so simple, it would be better to proceed with it. I therefore continued the separation of the uterus from the bladder, and, applying Spencer Wells's large clamp forceps on either side, cut away the uterus with scissors. I then applied a strong ligature of silk on either side, and removed the clamps. Several pressure forceps had been applied during the earlier part of the operation, and these were left on. They were protected with iodoform gauze, a T bandage put on, and the patient sent back to bed. The whole operation

¹ Since reading the present paper, the author has had the opportunity of obtaining tracings, within the London Hospital, from ayahs wearing Oriental dress. Nine ayahs hitherto tested, all being multiparous, exhibit movement below the umbilicus not less free than in average English males.