palate and exposing the nasal fossæ, the mucous membrane of the posterior nares was seen lined with a whitish wash-leather sort of membrane, elastic, stretching to a considerable degree, but then breaking off abruptly and with a clean edge. The epiglottis was covered completely on both surfaces with a dirty grey exudation, which descended and lined the whole of the interior of the larynx, filling up the ventricles and sacculi, but it ceased abruptly at the lower border of the cricoid cartilage. There was no exudation in the trachea or in the bronchial tubes, but a catarrhal secretion only. The œsophagus was quite normal in every respect. The stomach had a soft, semi-doughy feel, not unlike a portion of intestine that contains fæces of moderate consistence. On opening the stomach, it presented an irregular dark reddish-brown appearance with a slight olive-green tint. This was found to be the surface of a continuous membrane that lined the whole of the interior of the stomach, but was abruptly cut off at the cardiac and pyloric orifices. The membrane varied in thickness in different places; it averaged about one-twelfth of an inch; over the rugæ it was one-eighth to one-sixth of an inch or more; in some of the sulci between the rugæ it was less than one-sixteenth of an inch.

The sites of the rugæ were well seen, and marked by thick elevated longitudinal ridges of the false membrane. The membrane was adherent to the mucous surface of the stomach, but it was easy to separate it and peel it away. The under surface of the membrane was marked with depressions, elevations, etc., which corresponded to similar markings on the subjacent mucous membrane, and it was of a dark venous-red colour, without the green tinge of the free surface. The membrane was continuous, and might probably have been completely stripped off in one large piece. Except in thickness and colour, it differed but little in consistence, elasticity, and fracture from the exudation in the fauces and nares.

On peeling off some of the exudation and exposing the mucous membrane, the latter was seen of a dark-red colour and glistening; it was entire, not abraded or ulcerated; it was soft, but without any mucus.

On separating the rugæ, which was readily done by simply stretching the stomach, the spaces between were found of a much lighter colour, but studded with innumerable red points. The rugæ themselves were very dark, with a black-currant-jelly-like colour, and studded with dark-red punctiform injections from a pin's point to a pin's head in size, round and circumscribed; some had coalesced, as it were, and formed dark-red spots as big as a split pea.

The intestines showed no trace of disease. There was some pulmonary collapse, some emphysema, and some lobular pneumonia. The renal tubules and cells contained an excessive quantity of granular matter. The urine in the bladder was found to be loaded with albumen, and there was much renal epithelium and granular casts in it.

The exudation from the stomach under the microscope presented an irregular, fibrillated, and reticulated appearance, not unlike simple coagulated lymph, and was rendered transparent by acetic acid. Intermingled were numerous red blood-discs and numbers of cells about the size and shape of white blood-corpuscles, granular, and in many distinct nuclei were seen on addition of acetic acid. Here and there was a columnar epithelial cell. A separate scraping from the free surface of the exudation showed numerous columnar epithelia, free nuclei and granules, and a few starch granules. No sporules or mycelia could be detected, and no sarcinæ.

The morbid specimens, together with the notes of the case, were given by me to Sir William Jenner, who was then lecturing on Medicine at University College, and they were shown by him to his class. He considered that the gastric exudation was a remarkable example of true diphtheritis of the stomach.

The terms "croupous" and "diphtheritic" have been used with varying meanings. In the last edition, quite recently published, of Dr. Frederick Roberts's work on Medicine, he says: "Some pathologists regard diphtheritic as differing from croupous inflammation, in that a fibrinous exudation forms not only upon but also in the substance of and beneath the mucous membrane, which as a consequence is destroyed and converted into a slough, and an ulcerated surface is left on separation;" and he says, "the reality of this distinction is very questionable."

My case shows at least that in the stomach there is room for doubting this difference, for the exudation was undoubtedly diphtheritic, yet it presented the character of a croupous membrane,

inasmuch as it was deposited on the mucous surface in a manner in no way differing from so-called croupous deposits.

AN OLD HIGHLAND FORM OF MASSAGE, POPULARLY PRACTISED FOR THE PREVENTION OF CONSUMPTION.

By THE REV. D. T. MASSON, M.A., M.D.

ALL over the counties of Ross, Sutherland, and Caithness there was practised in my early days a form of chest massage for the prevention of consumption, which, like other popular remedies and manipulations, once laughed at as "old wives' cures," but now recognised and approved by the profession, might with advantage be received into the routine of regular therapeutics.

The professed object of this manipulative treatment was to "open out the chest," and the *modus operandi* was as follows. The patient, stripped to the loins, was seated on a high stool, while the operator, usually a strong, healthy, muscular woman, stood behind. The patient was first made to raise his arms and join hands over the top of the head or behind the neck. The operator now advanced a hand on each side of the patient, from behind forwards, till both her hands met over the third and fourth segments of the sternum, whence, with firm, equable pressure, her palms, lubricated with sweet fresh butter, were swept downward and backward, following the line of the lower border of the chest. After two or three similar passes of the operator's palms over the same region, and with increasing pressure, her fingers were slightly curved downwards and inwards, so that in the sweep from sternum to spine the lower border of her palm, and especially the outer side of the little finger and tip of the fourth, were to some extent hooked under the lower border of the chest. Little by little this action was accentuated, till, in the backward sweep of the operator's palms, her fingers were pushed well under the lower border of the chest and the false ribs, pulling them steadily outwards. After this the backward sweep of her palms was carried step by step up the chest, sweep after sweep coming nearer the clavicle, where again the tips of the fingers, though in a modified way and to a greatly lessened extent, played the same part as they had been made to play at the lower border of the chest. And now came the critical part of the operation. In most persons, even while yet young, the xiphoid cartilage tends greatly to curve inwards into the abdomen. This my old Highland Medicine Woman held to be the "original sin," whence came almost all forms of chest infirmity, as well as not a few forms of serious stomach ailment. To the in-growing xiphoid, therefore, she now paid special attention. Very gently at first, but evermore with firmer and firmer touch, she concentrated her manipulations on this peccant appendage of the human breast-bone. While her thumb made a succession of short steady passes, with considerable pressure, over what in young persons may be called the sterno-xiphoid articulation, her fingers watched their opportunity to get in under the free end of the xiphoid, so as to pull it outwards, and thus by continued and repeated manipulation to train it, as it were, into a more healthful direction. This manipulation was long continued and very searching; and the same manipulation, though not necessarily so carefully tentative or so prolonged, was again very energetically practised along the whole lower border of the chest bit by bit, pulling outwards and upwards that whole plate of pliable semipalmated cartilage which there terminates the five lower true ribs, and forms the outer inferior boundary of the thorax. Bit by bit, from the xiphoid to near the spine, she thus dug her four powerful fingers under this cartilaginous lower border of my chest under the free ends of the false ribs, pulling them outwards with an energy that gave no little pain. This she called "opening the chest," and it certainly seemed as if she had effectually increased the breathing capacity of the lungs.

On the prophylactic, and to some extent the remedial, value of this simple form of old Highland massage, I need here say nothing. One word more is all that need be added. The *nutritive treatment* of incipient phthisis had a well-recognised place in our old popular Celtic therapeutics. Cod-liver oil was not then popularly known as a specific, but we had great faith in cream; in warm milk, fresh drawn from the healthy cow; living a healthy,

natural life on healthy, natural food; in marrow from the long bones of the ox; and in ox-blood, served up in the popular form of black puddings. Snail-oil, also, and linseed-tea were commended as salutary, if less palatable, remedies. With this line of treatment was conjoined the use of such herbs as might stimulate healthy appetite and promote healthy digestion; while in the later stages of the disease that great factor of folk skill called "rule of thumb" had somehow stumbled into the use of such simple remedies as modern science now guides us to prescribe in aid of the vicarious action of reins and liver.

ON INFLAMMATORY DISEASE OF THE SEMINAL VESICLES.

By JORDAN LLOYD, M.B., M.S., F.R.C.S.,

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A FEW years ago the term inflammatory diseases of the Fallopian tubes was scarcely to be found in the clinical vocabulary of practical surgeons. Such conditions were casually referred to by erudite pathologists rather as morbid possibilities than as everyday realities. During the past few years, however, this latter class of maladies has had "daylight let into it," and now stands revealed to us as a common incident in the morbid history of civilised woman. Of the liability of the Fallopian tubes to inflame there can be no doubt, and of the part played by gonorrhoea in initiating salpingitis most authorities are agreed. Whether time will prove that the analogous structures in males are similarly prone to affection I do not know, but I am already convinced that inflammatory diseases of the sexual apparatus lying at the base of the male bladder are far from uncommon, and that in seminal vesiculitis the key is to be found to much that is puzzling in many of the so-called prostatic and bladder disorders. A brief reference to the anatomy of the parts concerned will not, I trust, be considered altogether out of place.

The vesiculæ seminales are two membranous receptacles, situated one on each side, beneath the base of the bladder between it and the rectum. Their length is usually about two inches, and their greatest breadth from four to six lines; but they vary both in size and shape in different individuals. Their posterior extremities are separated widely from each other, but anteriorly they converge so as to approach the two vasa deferentia, which run forwards to the prostate between them. With the vasa deferentia thus interposed, they occupy the two diverging sides of the triangular portion of the base of the bladder, which lies upon the rectum, and is bounded behind by the line of reflection of the recto-vesical fold of the peritoneum. The seminal vesicles themselves rest upon the rectum, but are separated from it by a layer of the recto-vesical fascia which attaches them to the base of the bladder. Their posterior ends lie beneath the openings of the ureters.

The common seminal or ejaculatory ducts, two in number, are formed on each side by the junction of the narrowed extremities of the corresponding vas deferens and vesicula seminalis, close to the base of the prostate. From this point they pass side by side through the prostate between its middle and lateral lobes. After a course of nearly an inch they end in the floor of the prostatic portion of the urethra by two valve-like slits placed in the veru montanum, one on each prominent margin of the opening of the prostatic sinus.

Seminal vesiculitis is usually secondary to mischief in the urethra. It is a common accompaniment of gonorrhoeal epididymitis, and originates in a precisely similar manner. When the inflammatory process has crept from the urethra along the common ejaculatory duct to its termination, it is as likely to proceed along the short seminal tube to the vesicle, as along the twenty-four inch vas deferens to the epididymis. I believe it commonly extends along both these structures.

I have seen the vesicles inflame secondarily to urethritis, set up by the passage of a bougie, by the presence of a stricture, and after coitus with a leucorrhoeal woman. I have seen both vesicles suppurate in one case where their inflammation appeared to be primary; at least there was no antecedent cause discoverable in the urethra.

When acute inflammation attacks a vesicle it gives rise to a

swelling at the side of the base of the bladder, the greater part of which is due rather to effusion of inflammatory products into the perivesicular connective tissue than into the cavity of the vesicle itself, just as we see that in epididymitis the bulk of the enlargement depends upon inflammatory infiltration into the connective tissue between the tubules of the epididymis.

Seminal vesiculitis, like acute epididymitis, most frequently terminates in resolution. It sometimes ends, however, in suppuration, and, when this occurs, pus may make its way laterally into the ischio-rectal fossa, or may diffuse itself deeply around the rectum (constituting one of the varieties of peri-rectal suppuration), or may discharge itself by the ejaculatory duct, or may open either into the bladder or rectum, but never into both cavities together.

The following case is one of suppuration of both seminal vesicles without an antecedent urethritis.

On May 23rd, 1888, I was asked by Dr. Ravenhill, of Bordesley, to see a case of acute prostatic abscess. The patient was a healthy man, aged 30, married, three children, wife again eight months pregnant. He had never had any venereal disease. He felt pain in the rectum about twelve days before, which came on without any known cause. Within forty-eight hours he had difficulty with his water, with frequent desire to micturate and pain at neck of bladder. There was a cloud of mucus in healthy urine. He had no orchitis. With a finger in the rectum I found on the right side a deep-seated, smooth, round, fluctuating swelling, with its longest diameter in the direction of the bowel, and its lower end about one inch and a half from the anal margin. Pressure on this was painful, and gave rise to a desire to micturate. Under chloroform I made a puncture through the perineum, inserting a long-bladed knife about one inch to the right, and in front of the anus, and guided by the finger in the rectum, entered the blade to the depth of two inches, tapping a cavity containing about four drachms of pus. A finger passed through the wound entered a cavity which lay altogether to the right of the middle line, up towards the sides of the pelvis. The cavity was drained, and all symptoms at once disappeared. The wound healed up completely in eight or nine days, and for three or four days he appeared to be perfectly well. He then developed a train of symptoms precisely like those of his former illness, and on June 8th I was asked to see him again. I then found an elongated fluctuating swelling on the left side of the base of the bladder, the right side being perfectly normal. Under chloroform I made a deep puncture in the left side, and entered a cavity as large as a hen's egg, containing thick yellow pus. A finger exploring the cavity found it close to the base of the bladder, and passing upwards so that the finger tip could almost be felt from the left groin above. The cavity was drained, and in two or three weeks had soundly healed.

Some cases of vesiculitis pursue a chronic course, and distend the cavity of the vesicle, a condition implying necessarily permanent choking of the ejaculatory duct, and giving rise to a cystic swelling behind and beneath the bladder. We are familiar with a similar state of things in connection with the gall-bladder, and in hydro- and pyo-salpinx. A case of this kind is reported by Dr. Smith, of Baltimore, in the *Lancet*, vol. ii, 1872, p. 559, under the title of hydrocele of a seminal vesicle. Dr. Smith's patient had a cyst behind the bladder and in front of the rectum which completely filled the pelvis, and reached up to the umbilicus. An ounce of urine having been drawn off by a long catheter, the cyst was tapped *per rectum*, and ten pints of brown serous fluid withdrawn.

Dr. Ralfe describes¹ the case of a sailor, aged 25, whose symptoms were of five months' duration. He had a cystic tumour filling the pelvis, pressing on the rectum, and presenting in the middle line of the abdomen above the pubes. After death this was found to be due to a large cyst connected with the left seminal vesicle.

Another somewhat similar case is recorded by Mr. Mitchell Henry in the *Medico-Chirurgical Transactions*, vol. xxxiii, p. 307. A sailor, aged 20, was admitted into the Middlesex Hospital with severe pains in the loins and left hip-joint, attributed to exposure to a severe wetting six months before. He had never had syphilis or gonorrhoea, and had usually no difficulty in micturition. The urine, specific gravity 1029, was thick, scanty, and loaded with pus. Hæmaturia followed, and a little later symptoms of peritonitis, which proved fatal. *Post-mortem* examination showed general early peritonitis; bladder contained purulent fluid, and

¹ *Lancet*, vol. ii, 1876, p. 782.