REPORT OF FIFTH SERIES OF FIFTY CASES OF OVARIOTOMY.

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I HAVE again to record a diminishing mortality after ovariectomy. In the first series of fifty cases, there were 11 deaths; in the second, 8; in the third, 8; in the fourth, 6; in the fifth, 4. Of the four fatal cases, two died comatose, with suppression of urine, within thirty hours after operation; two died from blood-poison. One was a case of tumour of 53 lbs., complicated by a large fibroid uterus. I unwisely removed a pediculated portion of the fibroid, which seemed to be much in the way. A drainage-tube was put in behind the tumour in the pelvis. The tube was displaced, probably as the patient was moved into bed. No serum escaped by it; and a fatal result happened in a case that promised to do well. I have no hesitation in saying that earlier operation would have saved the other three, for they were originally healthy women. One was a large sarcoma of slow growth. When seen, the patient had been little out of bed for sixteen months. The tumour was removed quite easily; but extensive adhesions to the mesentery and intestine led to the tying of nearly a hundred vessels. In the third, also complicated by a large uterine tumour, an inflammatory affection of the knee prevented the patient from coming to town when she was prepared to do so six months before. During this time she was tapped six times, seven gallons of fluid being removed on each occasion. The cyst-walls alone weighed upwards of 50 lbs.; adhesions were universal, and of the utmost firmness, especially to the liver. The fourth fatal case—one of double dermoid cyst—had been often urged by Dr. Mackenzie of Larkhall to have the tumour removed in a favourable time. An injury caused rupture of the cyst, and for nine months she was confined to bed. For long she was blood-poisoned, and had double phlegmasia dolens, the oedema extending even into the axilla; yet she rallied after many tapings. The operation lasted three hours

and a half. Masses of fat and hair had escaped into the upper part of the abdomen, and had become encysted by thick deposits of lymph in a most wonderful way. All this had to be dissected out. When she was placed in bed after operation, the temperature had fallen to 92 deg.

Not included in the table is that of a case in which ovariectomy was performed a second time. The patient recovered. In two cases of acute suppurating dermoid cysts—one seen with Dr. Keiller, the other in Lanarkshire with Dr. Lindsay and Dr. Lennox of Hamilton—the pelvic adhesions were such that relief by ovariectomy could not be thought of; yet as both were in the last stage of the disease, it seemed right to try something. They were treated by incision and drainage, and both recovered perfectly. A third, similarly treated nearly two months ago, so far promises well in the hands of Dr. J. Cox of Innerleithen. Two cases of cyst of the broad ligament are apparently cured by tapping.

In three cases I was unable to complete the operation. One, aged 67, a patient of Dr. Lorraine, had been often tapped. On exposing the tumour, it was found to be malignant, with disease of the peritoneum. There was no ascites; the tumour was not disturbed. The second was sent by Dr. William Bell. Ascitic fluid surrounded a papillomatous growth. Early operation was advised, in the hope that no secondary affection of the peritoneum had yet taken place. The pelvis was filled with secondary growth, involving the base of the tumour, and I was unable to remove the pelvic portion. The third came from Dr. Borthwick of Dumfries. A large thin-walled cyst was so adherent that, though part of it was separated, the pelvic portion could not be removed. The cyst was fixed in the wound and drained. These three cases ultimately proved fatal.

As in former reports, every case is now given in which I have interfered with any abdominal tumour except by tapping. In the first hundred cases (*Lancet*, 1867 and 1870), deaths after incomplete operations were included amongst the deaths of the completed cases. A short history was also given of every case of ovarian tumour that was seen and not operated on, as well as the reason for not operating. A sort of balance-sheet was thus formed, by which the value of the oper-

Table of Fifty Cases of Ovariectomy.

No.	Medical Attendant.	Date.	Age.	Adhesions, Weight of Tumour, etc.	Result.
201	Dr. Dobie, Chester	June 1875 ..	52	Parietal, omental, and mesenteric adhesions; sarcoma; some ascites; 14 lbs. ..	Recovered
202	Dr. Binny, Denny	June	48	Inflamed burst cyst; 20 lbs.	"
203	Dr. Greig, Dundee	July	23	Extensive parietal and omental adhesions; 40 lbs.	"
204	Dr. Dobie, Chester	September ..	49	Slight parietal and omental; 53 lbs.; pediculated uterine fibroid also removed ..	Died
205	Professor Lister	September ..	40	No adhesions; 26 lbs.	Recovered
206	Dr. Herring, Bultih, Brecon ..	September ..	68	General parietal adhesions; 47 lbs.	"
207	Dr. Ross, Inverness	October	48	Extensive parietal and omental adhesions; 17 lbs.; fibroid of uterus	"
208	Dr. Campbell, Dundee	November ..	55	Omental adhesions; 33 lbs.	"
209	Dr. Logie, Kirkwall	November ..	21	Semi-solid; 18 lbs.	"
210	Dr. Hay, Carlisle	January 1876 ..	35	Burst cyst; 17 lbs.	"
211	Dr. S. Moore, Glasgow	January	37	Very firm and extensive adhesions; 68 lbs.	"
212	Dr. Logie, Kirkwall	January	47	Jelly tumour; 21 lbs.; sarcomatous disease of peritoneum	"
213	Dr. Wedderburn, Forfar	January	13	Omental adhesion; dermoid tumour; 18 lbs.	"
214	Dr. Lumgair, Largo	February	47	Extensive parietal and omental adhesions; large fibroid of uterus	"
215	Dr. Bramwell, Perth	February	23	Omental, parietal, and pelvic adhesions; 35 lbs.	"
216	Dr. Logie, Kirkwall	March	30	Parietal, omental, and intestinal adhesions; 56 lbs.	"
217	Dr. McCulloch, Dumfries	April	38	Extensive omental adhesions; 35 lbs.	"
218	Dr. Ross, Stonykir, Wigton ..	April	51	Firm adhesions to uterus and in pelvis; both ovaries removed; 34 lbs. and 1 lb. ..	"
219	Dr. M. Duncan	May	44	Both ovaries removed; 12 lbs. and 7 lbs	"
220	Dr. Skae, Larbert	June	35	No adhesions	"
221	Dr. Meadows, London	June	50	Omental, mesenteric, and intestinal adhesions; sarcoma; some ascites	Died
222	Dr. Dobie, Chester	July	18	No adhesions; 31 lbs.	Recovered
223	Dr. Henderson, Helensburgh ..	September ..	51	Parietal and omental adhesions; 40 lbs.	"
224	Dr. Graham, Liverpool	September ..	30	Omental and extensive pelvic adhesions; 15 lbs	"
225	Dr. Weilobyski	September ..	44	Very extensive and firm parietal and omental adhesions; 65 lbs.	"
226	Dr. M. Duncan	October	24	No adhesions; 37 lbs.	"
227	Dr. Gowers, South Shields ..	November ..	26	Adhesions very extensive; burst putrid cyst; pyæmic fever	"
228	Dr. Scott, Dumfries	December ..	57	General parietal and omental adhesions	"
229	Dr. Holman, Reigate	December ..	34	Pelvic adhesions to uterus and rectum	"
230		March 1877 ..	73	Parietal adhesions; 22 lbs.	"
231	Dr. Croom	March	50	General parietal adhesions, 19 lbs.	"
232	Mr. Covey, Puckeridge, Herts ..	March	60	No adhesions; 43 lbs	"
233	Dr. Sidey	March	67	Parietal adhesions, to bladder and in pelvis; suppurating cyst; 60 lbs. ..	"
234	Dr. MacLagan, Dundee	April	19	No adhesions; 16 lbs.	"
235	Dr. Mackenzie, Larkhall	April	26	Adhesions universal; burst dermoid cyst; both ovaries removed	Died
236	Dr. Brown, Dunfermline	April	21	Very firm and extensive adhesions, parietal and omental; 47 lbs.	Recovered
237	Dr. Lorraine, Castle Douglas ..	April	53	Adhesions universal, extensive to liver; 95 lbs.; large fibroid of uterus ..	"
238	Dr. Wilson, Gateshead-on-Tyne ..	May	41	Burst jelly cyst; both ovaries removed	Recovered
239	Dr. Edmond, Stonehaven	May	40	Firm and extensive pelvic adhesions; 20 lbs.	"
240	Dr. Montgomerie Bell	July	62	No adhesions; 36 lbs.	"
241	Dr. Dick, Harrington	July	54	General parietal adhesions; 17 lbs.	"
242	Dr. Dobbie, Ayr	August	27	No adhesions	"
243	Dr. Gordon, East Linton	September ..	22	No adhesions; 28 lbs.	"
244	Dr. Gemmill, Kirkmaiden	September ..	24	Parietal adhesions; 10 lbs.	"
245	Dr. Gemmill, Kirkmaiden	September ..	57	Very firm parietal and omental adhesions; 26 lbs.	"
246	Dr. Bell, Buchhaven	October	28	Parietal, extensive omental, and pelvic adhesions; 25 lbs.; ascites	"
247	Dr. Johnston, Stirling	October	48	Parietal; 34 lbs.	"
248	Dr. De Vitre, Lancaster	October	53	Extensive adhesions to uterus, bladder, and pelvis; 27 lbs.	"
249	Dr. Cullen, Helensburgh	October	20	Omental adhesions; sarcoma; 7 lbs.; ascites; double pleurisy	"
250	Dr. Dickson, Carnoustie	November ..	27	Parietal and omental adhesions	"

ative results might be judged. In the second hundred cases, the London example was followed, and the deaths after completed and incomplete operations were separated; but details were given of every case of incomplete operation. Now, the practice seems to be to ignore altogether incomplete operations, exploratory incisions, or errors of diagnosis.

My confidence in the cautery in the treatment of the pedicle was some time ago shaken by hearing of a death from hæmorrhage the day after operation in a case where it was employed. In four-fifths of the cases in this series the clamp was used, the cautery being reserved for very short pedicles. Of late, my faith in the cautery has returned, and I have used it in some ordinary operations. The last twenty-one operations were performed under the carbolic acid spray.

Sulphuric ether has now been given in two hundred operations. Properly administered, it is nearly a perfect anæsthetic. I have pleasure in acknowledging the value of Mr. Ormsby's simple inhaler.

JABORANDI PROPOSED AS A REMEDY IN HYDROPHOBIA, FROM OBSERVATIONS IN TWO CASES OF THE DISEASE IN MAN.

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THE attention both of the public and of the profession is at present so much taken up with the subject of hydrophobia, that I have thought my experience of two cases of this disease, presenting some special features of interest in connection with its etiology, and perhaps suggesting a means of relief, if not of cure, might perhaps be of service in elucidating the natural history of this obscure disorder. During my residence in China, I had an opportunity of seeing the only two cases of hydrophobia which, so far as I have been able to ascertain, have ever occurred among the European residents in that empire. Rabies is by no means uncommon among the native dogs, but not so much so as one would expect from their neglected condition and cruel treatment. The cases to which I refer created great interest, I may almost say excitement, among the European community at the time, not only from the rarity of the affection, but also from the circumstances under which they were presented.

The first case occurred during the hottest part of the season of 1866. The sufferer was a young Englishman in robust health, tea-taster in one of the leading mercantile houses, who had recently arrived from England, and, like many of the new comers, had been attacked with an abundant crop of boils; some of these, in the neighbourhood of the ankles, had become somewhat ulcerated from rubbing. On the Sunday afternoon, he had been awakened from a nap by his little English bull-terrier licking one of the ulcerated spots on the ankle. The dog had been observed for some days previously to be somewhat cross and snappish, and much less playful than usual; but this was attributed to the oppressive heat of the Chinese summer, of which this was its first season's experience. Within fourteen hours, the unmistakably characteristic symptoms of the dreadful disease had manifested themselves, and within thirty-six hours proved fatal. Morphine, and then the sulphate of atropia, in heroic doses, were injected hypodermically without the slightest effect. Extract of belladonna was applied with the same result along the spine; but the only relief obtained, and that for brief intervals only, was by applying an improvised ice-bag to the back, and the inhalation of chloroform as continuously as the greatly embarrassed condition of the respiration would permit. The infecting dog was destroyed before any more active signs of rabies developed themselves.

The second case presented itself in the person of another young Englishman, an *employé* in the Imperial Customs at Shanghai. He was brought to the General Hospital two days after the death of the preceding, and had been greatly impressed by hearing of it. His attention was drawn to what had hitherto been an almost imperceptible scar on the ball of the thumb, which had resulted from the bite of an "angry" dog in England, nearly two years before. It had now become irritable and red, but did not actually open or ulcerate; but in this case also the same terrible symptoms developed themselves with an equally rapid and fatal result.

These two cases involved me in a somewhat lively correspondence with my friend Sir Edmund Hornby, the Chief Judge of the Supreme Court, who, without having seen them, wrote to the papers, saying he believed they were cases of a purely nervous character, terminating fatally from the intensity of the mental impression, and that he had seen many cases of the same kind

during his official residence in Constantinople. But of the true hydrophobic character of these two cases there could be no doubt whatever in the minds of all who saw them. Indeed, I for one do not know any disease of which the symptoms, in form and sequence, are more characteristic. The pathogeny of the disease in each of the cases in question was peculiar. In the first, the inoculation was effected by the saliva of a dog in whom the disease was not markedly developed, and then by absorption from the ulcerated surface. This did not prevent the disease from being at once developed, and running its course with extreme rapidity. In the second case, the original site of inoculation nearly two years before had completely healed, but the poison evidently remained latent in the system until the circumstance of a new case again directed the mind of the patient strongly to his own experience, with an intensity sufficient to rouse the slumbering mischief into fatal activity. It is impossible, I think, to overlook the mental impression as an important factor in the morbid process, where a sufficient predisposing etiological element exists in the potentially affected organism. The exciting cause need not be essential in character, and very often is here as elsewhere out of all proportion to the morbid action which it initiates.

Among the pathological lessons taught by the study of this disease, is to be noted the variety in the morbid species produced by transmission from the lower animals to man. The natural history of hydrophobia shows abundantly that, in the lower animal, very often the phenomena of the disorder are altogether less strikingly developed, and do not present that terrible intensity which agonises the human sufferer and appals the beholder. The dog may only appear dull and stupid and disinclined to play, perhaps a little cross and snappish with strangers, able to swallow both solids and fluids, as shown by voluntarily licking its master's sores, showing therefore none of the purely hydrophobic phenomena, and yet be capable of communicating the malady in its most acute form to man, in whom the hydrophobic character is so markedly pathognomonic.

I do not know that I would have thought these reminiscences of hydrophobia of sufficient interest to add them to the already teeming literature of the subject, except that, in recalling the individual symptoms, I remember one at least which suggests that, in a recent proposed addition to our *materia medica*, we may possibly have a means of relieving the most distressing symptoms of hydrophobia, if not of eliminating the poison itself and curing the disease. In the first of these cases, I particularly noticed that there seemed to be an entire suspension of the functions of the whole salivary apparatus. The tongue, mouth, and fauces were perfectly dry; and of this condition, and an intense sensation of thirst apparently associated with it, the patient chiefly complained as his greatest source of distress in the intervals of the tetanic spasm. Strong efforts only resulted in the collection of pieces of tough viscid mucus, which could not be swallowed, and which were ejected with frequent and difficult efforts. This is in striking, and, as I would point out, important contrast to the dog, where the saliva may be seen flowing abundantly from the open mouth. The specific animal as well as the mineral poisons, appear to have a special affinity for particular organic systems, as the vehicle or apparatus for their elimination from the body. Of these organic systems, the skin and the salivary glands seem to be by far the most active, and it is more than probable that their action is mutually vicarious. These facts are too well known to require any further illustration. Now, as the saliva is evidently the secretion in which the poison of rabies, in the dog at least, is found most abundant, and by which it is propagated, it follows that the salivary glands must be largely, if not specifically, involved in the morbid action. If we find, then, the whole salivary function suspended, or at least impeded, in cases of hydrophobia in the human subject, ought we not to accept the physiological indications so plainly presented, and endeavour to restore the action of the salivary glands as the special emunctories of the morbid poison. I think that this is the direction in which we are to look for our remedy; and I believe that it will probably be found in the *jaborandi* of Mexico, the latest transatlantic addition to our *materia medica*, and which has shown itself to be the most potent sialagogue and diaphoretic known. The only cures of hydrophobia (for such are reported on credible authority) have been in cases where either the morbid nervous phenomena have been reduced by their physiological antagonistic curare, while the *materies morbi* has been allowed to exhaust itself, or its elimination has been left to the natural efforts; or, on the other hand, where the excretory action of the skin and salivary glands have been excited by the hot-air or mercurial bath. Even admitting that such cases were not those of true hydrophobia, at least they are evidence that symptoms, markedly partaking of this grave character, have been at least relieved by rousing the action of the skin and salivary apparatus.

The dose of the powdered leaves of *jaborandi* is from sixty to eighty