"keeper" was a whip, which he used at discretion, and in Hogarth's pictures of Bedlam the keeper is depicted with a whip stuck in his belt. This practice was still continued in 1800. "Keepers" were allowed, and even encouraged, to retaliate upon violent patients; and even George III, the revered Father of the people, who was rarely spoken of but with slavish adulation, was not only repeatedly put into a strait-waistcoat, but on at least one occasion was knocked down "as flat as a flounder" by his keeper. This was told by an eyewitness to Dr. Paul of Camberwell, who died in 1899.

MEDICAL TREATMENT OF INSANITY.

The medical treatment of insanity was in intelligence and humanity much on a par with the mechanical. Dr. T. Munro, who was physician to Bethlem in 1800, has thus described it: "Patients are ordered to be bled about the latter end of May, according to the weather; after they have been bled they take vomits once a week for a certain number of weeks; after that we purge the patients. That has been the practice invariably for years, long before my time; it was handed down to me by my father, and I do not know any better practice." The venesections were not scamped. In acute mania 30 or 40 ounces were drawn at a time, and this was followed by the application of 20 or 30 leeches to the temples. Sir Everard Home advised that George III should be bled till he fainted, but the king flatly refused this mode of treatment, and the court physician had to content himself with an abundance of leeches. The other remedies employed were hellebore, setons, issues, blisters to the head and legs, opium, camphor, musk, medicated snuff, ice and snow to the head, and music.

THEORIES OF THE NATURE AND CAUSES OF INSANITY.

As an alternative to the "unnatural and brutish violence," as he calls it, with which the insane were usually controlled, Pargeter insists with great solemnity and force upon the importance of "catching the eye" of the patient, and he relates several cases in which most intractable maniacs were subdued by this simple means. "I suddenly unlocked the door," says he, "ran into the room, and caught his eye in an instant. *The business was then done*; he became peaceable in a moment, trembled with fear, and was as governable as it was possible for a furious madman to be."

Pargeter did not think it possible for the human understanding to advance any other theory of insanity than that of Cullen, that the nervous fluid or electric aura which is secreted by the cerebrum and cerebellum and propelled into the nervous tubules, is capable of manifold variations in quantity, of many alterations in quality, may become thicker or thinner in consistence; and "a certain morbid or irritating principle or quality of that fluid acting upon the brain is the primary cause of insanity,..... but what the specific nature of that morbid quality is it is impossible to conceive, and it will no doubt remain for ever secret."

The causation of insanity lay chiefly in the luxury of the times. "Our ancestors deviated from the regular and temperate manner of life—our grandfathers were therefore weaker than our ancestors their offspring were still weaker than themselves, and we of the fourth generation have scarcely any idea, except what we learn from history, of former health and vigour." In addition to this, "the frequent and immoderate use of tea—long fasting—inflammatory food—turning day into night and night into day—the order of Nature most shamefully inverted—our time is

vilely prostituted—every active instrument of health is mutilated and maimed—our bodies become enervated, and our intellectual faculties impaired, and the date of life abridged—it is seriously to be remarked that in this age it is easier to meet with a *mad* than a *healthy* woman of fashion."

So wrote Pargeter, the chief authority upon insanity, in 1792, and if we are inclined to smile at the crudity of his inferences, we may perchance recover our gravity by asking ourselves what opinion our descendants in the year 2000 are likely to hold of the view that insanity is increasing at the beginning of the twentieth century owing to the hurry and rush of life, the increased severity of competition, the crowding into the towns, the spread of education, and the general rise in the standard of living.

Midwifery and Gynæcology in 1800.

By G. E. HERMAN, M.B., F.R.C.P., F.R.C.S.,
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THE progress that has been made in midwifery and gynæcology during the century that is closing, will be most clearly brought out if the reader be invited to look through what at the beginning of this century was a standard work upon the subject. Dr. Thomas Denman was then the leading practitioner in that department; he was an able, well-informed, and judicious man. The fifth and last edition of his *Introduction to the Practice of Midwifery* was published in 1805, and may fairly be taken to represent the high-water mark of knowledge of its subject at that time. In many things it corrected error and improved practice, but it is not the present purpose to dwell on its merits, but rather to point out where it has been left behind. Gynæcology hardly existed then; the word "midwifery," as used by Denman, included the diseases special to women.

PELVIC DEFORMITIES.

Denman's description of the normal pelvis is such that a modern editor, while he might perhaps fill in a little more detail, would hardly erase anything. But when Denman treats of deformed pelves, we find that he was aware that rickets and osteomalacia deformed the pelvis, but there his knowledge stopped. He could say nothing more about a deformed pelvis than that it was deformed. Since his time the pelvic deformities caused by the two diseases he mentions have been differentiated and explained: different varieties of the rickety pelvis have been shown to exist; and many pelvic deformities unknown to Denman have been described, methods for their diagnosis supplied, and their effects on labour analysed. Knowledge always brings power. The knowledge which enables us now to distinguish different kinds of pelvic deformity from one another, and to measure the amount of pelvic contraction, has given us the power of conducting labour with contracted pelvis with a precision of aim and a certainty of successful result impossible to Denman and his contemporaries.

We have realised another advance, curiously predicted by Denman, though not exactly in the way that he expected. Speaking of osteomalacia, he says: "It is far less frequent than the rachitis, but more dreadful in its consequences, which no medicine hitherto tried has had sufficient efficacy to prevent or to cure." A page further on he says, "Yet it is possible, by attending to the secretions, and discovering an excess or defect of phosphoric acid or the like principles, th

deficiencies and exceedings might be supplied or lessened, and perhaps the disease removed together with its effects." We can now, by removing the ovaries, remove osteomalacia, but not its effects. The benefit of oöphorectomy was discovered, not by any *a priori* reasoning such as Denman anticipated, but by the observation that cure followed delivery by Porro's operation.

URETHRAL GROWTHS AND UTERINE POLYPI.

Going a little further into Denman's book we find him mentioning that enlargement of the clitoris may require removal, and that "excrecences of various forms and sizes" may grow from the bladder, urethra "and about the meatus urinarius"; but of the different conditions that may enlarge the clitoris, and the various kinds of excrescence that may occur about the meatus he seems to have been ignorant. Denman devotes 12 pages to the subject of uterine polypus. Most of them are filled with a description of the operation of tying a polypus, and the relation of cases in which this was done. He tells the reader that "the first sign of a successful operation is the scent of something putrefying." In one of the cases he very candidly and instructively relates, an inverted uterus; and in another, a malignant growth, was taken for a polypus. At the present day a snip of the scissors relieves the patient of her polypus without any "scent of putrefaction." Denman's favourite remedy for prolapse was a globular pessary, which, when once put in the vagina, was left there. He mentions a case in which it was worn without harm, so far as he knew, for fourteen years.

OVARIAN DROPSY.

The rise and progress of ovariectomy is within the memory of many. At the beginning of the century not only could ovarian dropsy, as it was called, not be cured, but it could not be diagnosed. Denman tells us that it has often been mistaken for ascites, and that "when it is increased to a large size, unless it be of an irregular form, and we are acquainted with the early symptoms, the distinction is very difficult or sometimes impossible." Denman makes no mention of uterine fibroids excepting when assuming the polypoid shape.

ABDOMINAL PALPATION.

Denman's practice differs strikingly from that of today in his very limited use of abdominal palpation. This no doubt was the reason of his imperfect knowledge of fibroids and ovarian tumours. In his directions for the diagnosis of pregnancy, for the differentiation between true and false labour pains, and of the position and presentation of the child, he gives no instructions as to the examination of the abdomen. He examined it sometimes; for he says: "In a

few cases I have known the action of the abdominal muscles so regular and strong that the whole volume of the uterus has been heaved up and down alternately, in such a manner that it was scarcely possible to distinguish between this strange succussion and the proper action of the uterus." But he almost entirely relied upon vaginal examination; his deficient appreciation of the value of abdominal examinations was no doubt due to the fact that as he did not practise it, he was not expert at it. Describing irregular contractions of the uterus in the third stage of labour, he speaks of "the uncertain information we may acquire by the application of the hand to the abdomen." He advises that when the placenta has been expelled the attendant should put his hand on the abdomen to see that the uterus is not inverted; but, he adds, "this method is not always satisfactory." Even in *post-partum* hæmorrhage the only abdominal manipulation that he recom-

mends is "moderate pressure upon the abdomen with a very cold hand." His treatment of this dangerous condition was to get away the placenta by vaginal manipulation, and then give drugs and "cordials," and keep the patient cool and recumbent. How strange it would appear to Denman could he revisit us, and see a modern obstetrician conduct a labour without any vaginal examination! Next to such great things as anæsthetics and antiseptics, hardly any improvement in our methods has brought about better results than the systematic use of abdominal and bimanual palpation.

THE FORCEPS AND THE VECTIS.

The forceps which Denman recommends have their blades covered with smooth and thin leather, which, "without any significant increase of bulk, renders their introduction more easy, and takes off, both in appearance and reality, the asperity of the instrument." The instrument was twelve inches

long, and was to be applied over the child's ears. If the ears could not be felt, either because the child was too high or too closely locked in the pelvis, it was improper to use forceps. Denman warmly approved the vectis. He says he knows several gentlemen of eminence, accustomed to use the forceps, who have abandoned it for the vectis, but he has never known anyone accustomed to the vectis who has relinquished its use and resorted to the forceps. Denman lectured at one time in conjunction with Dr. William Osborn, and his opinion about the vectis brought a bitter attack by Dr. Osborn, not only on the ground that the forceps was the better instrument (he plainly said that he believed Denman had never used the vectis), but for the singular reason, as it now seems, that Denman's advice would do

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much harm because it was so easy for accoucheurs to use the vectis without their patient's knowledge. Denman had neither cephalotribe nor craniotomy forceps; after perforation his only resource was to pull with the crotchet, fixing this in different places, and pulling till something came, thus getting the head away in bits if it would not come through entire. As to Cæsarean section, if this seemed called for, the question before Denman was not whether Cæsarean section or some other mode of delivery should be chosen, but whether Cæsarean section should be performed at all; whether it was not kinder to the patient, and better, to let her die undelivered, than to perform a painful and almost certainly fatal operation.

PUERPERAL DISEASES.

The pathology of eclampsia was in 1805 shrouded in darkness. Its connection with albuminuria was unknown, and it is doubtful whether Denman had a clear idea of the differences between an epileptiform fit and other convulsive seizures.

Finally, the last chapters of Denman's book bring us to realise the most stupendous advance that has ever been made in medicine: the discovery that disease is produced by micro-organisms, and the power of antiseptics to protect human beings from such disease. Puerperal fever was to Denman a fatal disease, presenting clinically various forms (which he made no attempt to differentiate), the cause of which was utterly unknown. It is now certain that this disease can be prevented; although it is unfortunately also true that many women are still attended in labour by persons who either do not know or do not use the methods by which it can be prevented. Since Denman's time anæsthetics have relieved labour of its pain, and by making artificial delivery easier and more frequent have robbed childbirth of some of its danger.

CÆSAREAN SECTION.

But the consequences of Lord Lister's discoveries reach far further and are not yet exhausted. The once almost certainly fatal Cæsarean section is the simplest of all abdominal operations. When the surgeon opens the abdomen to remove a diseased part, he can never before exactly tell in what way the disease may have displaced or otherwise altered the parts he will have to deal with; and therefore he may in any such operation meet with some unexpected and formidable difficulty. In spite of this, the percentage of deaths following such operations is very small. No such difficulty attends Cæsarean section. In this operation the operator has to deal only with structures that are healthy and in their natural relations. The terrible mortality of the operation in the past came from septic poisoning, from bleeding, because operators knew not how to sew up the uterus; from the operation being done on patients who were exhausted and their tissues damaged by protracted labour; and from its being done in a hurry, under unfavourable circumstances, and by inexperienced operators. All these causes are preventable, and there seems no insuperable reason why the mortality of Cæsarean section should not be brought down to that of natural delivery. The dream of obstetricians for years has been the abolition of craniotomy. Denman helped to prevent the destruction of the child in a large class of cases by teaching the induction of premature labour. Within the last quarter of a century it has seemed as if the revival of symphysiotomy would render premature labour unnecessary. There is now good ground for believing that in the near future a perfected method of Cæsarean section may relegate craniotomy, the induction of premature labour, and symphysiotomy alike to the past.

Surgery in 1800.

By STEPHEN PAGET, M.A. OXON., F.R.C.S.,

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THE teaching of surgery at the beginning of the century is well represented by Samuel Cooper's *Dictionary of Practical Surgery*, an excellent piece of work, comprehending all methods of treatment of surgical cases, and all special surgery, and much physiology and pathology; and enlivened by many little personal touches of humour and of vehemence that are kept out of the textbooks of the present day. Having strength and soundness of constitution, it enjoyed a long life. It was still the best textbook of surgery, more than twenty years after it first appeared. In 1834, when the late Sir James Paget began his apprenticeship, he was told by a friend in the profession that he must possess the *Dictionary*:—

"For your *first year's Library*, let me recommend the last Edition of Cooper's *Surgical Dictionary*, an admirable Book, containing everything, the price about one guinea; you may keep it at home, and refer to it whenever you meet with a *hard word*."

Let us take in order some of the more important articles in the *Dictionary*, and see what were the principles and the practice of surgery about a hundred years ago.

ABDOMEN.

Cooper follows John Bell's teaching, that the entry of air into the abdominal cavity is not in itself dangerous to life. In any case of protrusion of wounded intestine through a wound of the abdominal wall, he would suture the intestine and return it; he might even, in quite recent cases of wounded intestine without protrusion, dilate the wound of the abdominal wall, "to see whether the part is near enough to be got at." But "when the wounded bowel lies within the cavity of the abdomen, no surgeon of the present day would have the rashness to think of attempting to expose the injured intestine for the purpose of sewing up the breach of continuity in it." He is inclined to operate, in favourable cases, for the cure of fecal fistula. He would not operate on any case of gunshot wound, or on any wound of the gall bladder. And he does not say a word about operation for internal strangulation, or for any sort or kind of internal obstruction.

ACHILLES TENDON.

Nothing is said of any operation to unite a ruptured tendo Achillis, and nothing is said of tenotomy.

AMAUROSIS.

This article, 17 pages long, is a good example of the confusion and vagueness of ophthalmic surgery before Helmholtz invented the ophthalmoscope; we understand the old joke, "Amaurosis is a disease in which the patient is blind, and the surgeon can't see anything." Cooper makes no clear distinction between cases of optic neuritis and cases of disturbed vision from remote causes. He defines amaurosis as a "paralytic affection of the retina and optic nerve;" but he seems to pass without a break from the transient hemianopia of migraine to the worst cases of optic atrophy.

AMPUTATION.

Writing before anæsthetics, he is terribly concerned for the want of more dexterity in these operations:

"The reason of the knife being so badly handled in the part of surgery, may generally be imputed to carelessness, slovenly habits, and fear and confusion on the part of the