GERONTAL CONSTIPATION AND ITS TREATMENT.*

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ETIOLOGY.

A. Prostatic Enlargement.

It has been estimated that 30 per cent. of men over 60 years of age suffer from hyperplasia of the prostate. If to these sufferers we add others in whom a very large prostate "may give rise to no appreciable symptoms,"¹ and may consequently remain undiscovered, the total percentage of elderly men in whom this organ is abnormally large is probably still higher. Situated as the prostate is between the bony unyielding symphysis and the rectum, any general enlargement of the organ exerts a flattening pressure upon the gut where it is in relation with the sacrum and coccyx. The gerontal tumour will be in the upper rectum just below the sigmoid flexure, and close to one of the usual sites of intestinal stasis. During the act of defaecation the plastic contents of the lower colon require a free passage into the rectum. A comparatively slight obstruction at this point may lead to a serious block.

B. Ineffective Peristalsis.

Recent investigations suggest that, so far as the propulsion of its contents is concerned, the alimentary canal can be divided into a series of sections, each of which, through its neuro-muscular apparatus, forms a more or less independent zone of rhythmic contractions. Seemingly these movements start vigorously as a rule at the upper junction of a zonal area and fade away gradually towards the lower one. As regards the automatism of the rhythmic contractions, the parts of the digestive tract situated near the orifices are least automatic in character, and most under the influence of the cerebro-spinal co-ordinated reflexes. On the other hand, the rhythmic movements of the central, that is, the jejuno-iliac, segment of the bowel probably furnishes "the only example known so far (1900) of a true co-ordinated reflex dependent entirely on peripheral nervous structures."² It is well known that in the neuroses associated with senility "disassociation follows the usual law of degeneration, and passes progressively from the unstable to the stable, from the less organized to the more organized, and from the less to the more automatic."³ In accordance with this law (?) the intestinal mid-segment will be the last to yield its automatism to senile decay, and so perhaps it is. On the other hand, stasis, with or without distension of the lower colon, and spasmodic contraction of the gut immediately above the obstruction, is a common result of this disorder. By the position of the cord-like tumour—representing the contracted bowel—whether it is above or below the splenic flexure, the severity of the obstruction can be to some extent gauged by the medical attendant.

C. Dryness of the Intestinal Mucosa.

A comparatively small prostatic tumour, situated near the junction of two rhythmic zones, might presumably cause stasis. Recent researches suggest that one of the functions of the colon is the absorption of water.⁴ Undue dryness of the faecal accumulation within the lower bowel will follow prolonged retention. "Peristalsis," and its analogue "vermiculation," can only be carried on so long as the two glissading surfaces—namely, that of the living tube and the side of the inert material adjacent to it—are freely moistened. The earthworm, for instance—to take a well-known *Oligochaete*—forms its tunnels in moist and plastic soil.⁵ Although well provided with segmental nephridia with which it excretes a fluid to lave its epidermal coat, it rapidly withers and dies when placed on dry soil. Our intestines, although they, too, are provided with excretory crypts (Lieberkühn's), that produce the succus entericus, laving the mucosa, yet cannot satisfactorily propel hardened scybala through the bowels. In neither of these two cases of rhythmic contractile movement can progressive or propulsive results be fully brought about, unless and until the inert material is in a condition

to react to the constrictions of the living tube; in other words, that material must be plastic, and, as a consequence, moist. Unfortunately, as above mentioned, old men are handicapped in two directions as regards this necessary accompaniment to a satisfactory peristalsis. Owing to the delay that so often occurs at the recto-sigmoidal juncture not only are the faeces dry, but the mucosa of the lower rectum at all events is usually abnormally dry also. Perhaps a dryness of the inner membrane of the gut may be in some cases general throughout the colon. However this may be, the dryness leads to excessive straining at stool, and may also account for the comparative frequency with which "volvulus" of sigmoid affects old men,⁶ the twisting of the gut being an immediate consequence of an overstrain.

Historic Precedents.

There are certain incidents which recur in the history of patients who suffer from this disorder, and recur with sufficient frequency to justify an inquiry as to whether or no there may be some causal relationship between them. After the age of 45 dietary indiscretions, undue sexual excitement, and inattention to the regular action of the bowels are, in my experience, the most usual coincidents. As regards the first, old men have long had a reputation for enjoying the pleasures of the table. Indeed, the ancient Greeks, who revered the antique, set aside special vintages for their consumption. They even coined a word—"gerousios"—to label this *αἰθρὸν οἶνος*, this sparkling wine, as Homer calls it.⁷ Moreover, they took care that the "gerousios oinos" was only drunk at these aldermanic carousals. The similarity of the spelling of the Greek word "gerousios" and its English equivalent (in that case) suggests to my mind a derivational relationship—an opinion not presumably held by the expert compilers of the Oxford *New English Dictionary*. Still, the reputation of the "aged, aged man a-sittin' on a gate" concerns us only so far as it indicates that the above mode of life favours the development of the disorder in question. I think that it does so in two directions. One of the commonest signs of good living when the first bloom of youth has "faded and gone" consists in an increasing girth of the lower torso. A tendency to corporeal expansiveness may in some cases be heritable; but, even so, careful dieting with a goodly proportion of fruit and total abstinence of alcohol will frequently check the tendency. It will also assist in checking the excessive straining at stool, and so prevent the early onset of "irritable heart," in my opinion the second most annoying symptom of gerontal constipation, and one which we shall subsequently find is by no means an uncommon accompaniment of the disorder.

Anent the other historic incidents, the learned Hebenstreit informs us in his book, *De homine sano et aegroto* (1753), p. 158, that men lose their youthful vigour later in life than do women:

Senior est maribus languor, viridisque senectas
Sufficit ad validos motus, et sepius illis
Grata juventutis facies internitet annis,
Et Veneres illis rident Charitumque cohortes, etc.

But even they eventually die of *marasmus*, a drying up. Meanwhile they suffer (according to the equally learned Rieger), oft "from an accumulation of humours in the big vessels . . . whence their stases and stagnations, etc." Indeed, the latter commentator draws a very complete picture of an old man affected by gerontal constipation. Rieger even mentions "palpitation" as a common accompaniment of this condition. He also says that "coctio debilitatur," digestion is enfeebled, and furthermore, we may get among other troubles, "dysuria, stranguria, calculus, ischuria," and so on.⁹

SIGNS AND SYMPTOMS.

I shall not attempt to describe in detail the many disorders that are supposed to circle around a diseased prostate. Suffice it to say that the most serious are distinctly surgical in character. Nevertheless there are symptoms which may be considered as specially diagnostic of gerontal constipation, and these we must explain in some detail.

It would seem that some, perhaps a majority, of the cases of simple enlargement of the prostate begin with venous congestion. A serious change in the blood supply

* Gerontal, from Greek *gerōn*, old man. Gerontal constipation means a disorder of senility affecting men only.

of the gland, which such a circulatory failure implies, would alone suggest the probability of some central (cardiac) causation, either organic or functional, and this conjecture is strongly confirmed if, as is often the case, we find the venules of the face, the nose in particular, also affected. When this is so, the elderly patient also suffers, as a rule, from those interesting, though to the ordinary general practitioner somewhat intricate, symptoms suggesting an "irritable heart," only to be fully diagnosed by an expert in such matters, aided, it may be, by some wonderful electric devices with numerous dial faces and leather straps. The most relevant discovery in this regard is, I take it, the close histological relationship that has been noted between the structural elements constituting the so-called mesenteric plexus (Auerbach's tissue) and "the nodal tissue in which the heart beat arose and the bundle by which the impulse was distributed in the heart."⁶ Experience shows that Rieger was right in giving prominence (about two centuries ago) to the fact that old men often suffered from palpitation. Tachycardia, dropped beats, irregular action of the heart, are frequently secondary to the intestinal stasis of gerontal constipation. Another anomalous symptom, by no means unusual, is probably due to the direct influence of the rectal tumour. It consists in a feeling of distension in the upper rectum, just as though a scybalon had lodged there and might at any moment descend into the trousers.

TREATMENT.

After all, the true worth of a medical treatise is best gauged by the efficiency of the prescribed treatment in bringing about, if not the cure, at all events the relief of the disorder. It is here, then, that an author has an opportunity to display his mother wit to the best advantage. "But, as Yak the Metaphysician hath written:

The wits are a dog that 'tis easy to call
but to cudgel him proveth another affair:
for shouts and abuse
are no manner of use
and unless he agrees, it is safe to declair
that the cudgelling process won't happen at all."¹⁰

The present writer feels the difficulty in this regard, and therefore offers the following suggestions with due diffidence.

The treatment of gerontal constipation can be best considered under three heads: Medicinal, dietetic, and manipulative. So far as drugs in general are concerned, it is evident that their action can at best be only palliative. Within these limitations and as a preventive of a colic block doses of the aromatic syrup of cascara are very useful. The drug, as is well known, "acts principally on the large intestine and empties the rectum. It is suitable for delicate and elderly persons."¹¹ It would seem probable, from the action of this drug, that some constituent of cascara sagrada acts specially on the mesenteric neuro-muscular plexus in the colon and so stimulates the rhythmic movements. The medicine ought to be given in a full dose directly any falling off in quantity or quality of the daily evacuation is observable. The treatment of the senile heart is, in my experience, best effected by small doses of the tincture of strophanthus in a little water, to which a few grains of sodium bicarbonate have been added. This mixture may be taken three times daily, about half an hour after a meal. It was recommended some years ago by a correspondent of this JOURNAL as a useful palliative of this condition.

As regards diet, I have already drawn attention to the value of fruit; here I need merely add that the ordinary rules regarding the modified requirements of the aged man for meats and the satisfactory mastication of food should be in all cases carefully observed. Dental hygiene is also very important, knowing as we now do, thanks largely to the American dentists, how the flora and fauna of pyorrhoea flourish in the uncleanly mouth. The less stimulant the old man absorbs the better his ultimate chance of longevity.

We now come to what is in many respects the most important part of this paper—that is to say, the part where the "cudgelling process" of the writer's brains is mostly required. When by daily increasing strain the old man begins to perceive that a visit to his doctor is imperative, much mischief may already have been inflicted upon the mucosa and blood vessels about the anus. In the treat-

ment of gerontal constipation cleanliness is undoubtedly the most important manipulative procedure. Congested piles, rents in anal mucosa, commencing prolapse, all rapidly yield as a rule to a régime of cleanliness. But in order that the hygienic procedure may produce the maximum effect, it must be started early. When there is much straining at stool, the gerontal right index-finger, well guarded, it may be, with two or three thicknesses of tissue paper, should be pressed upon the perineum just behind the symphysis, and so relieve the abnormal pressure of an enlarged prostate upon the rectum.

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- ² E. H. Starling, *Elements of Human Physiology*, fourth edition, p. 365.
- ³ J. R. Gilmour, *Senile Insanity*, p. 121 (*Green's Encycl. and Dict. of Med. and Surg.*).
- ⁴ Vaughan Harley, quoted by W. L. Ruxton, *Diseases of Intestines*, p. 522 (*Ibid.*).
- ⁵ Thomson and Miles, *Manual of Surgery*, p. 626.
- ⁶ A. Keith, Cavendish Lecture, see *BRITISH MEDICAL JOURNAL*, 1915, ii, p. 14.
- ⁷ See Agamemnon's honeyed speech to Idomeneus, II, 4, 259.
- ⁸ R. J. Porcock, *Vermes, The Concise Knowledge Natural History*, p. 674.
- ⁹ *Hippocratis* COI Aphorismi digessit et indices necessarios addidit Jo. Chr. Rieger, Riesenburgo-Prussus*, 1778, vol. i, p. 438.
- ¹⁰ Wm. Caine, *Bildad, the Quill-driver*, 1916, p. 147.
- ¹¹ *British Pharmaceutical Codex*, 1907, p. 221.

SARCOMA OF FRONTAL LOBE GIVING RISE TO OCULAR SIGNS ONLY.

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THE case here reported must belong to a rare group of cases, and the record is therefore of interest.

The patient was a bricklayer, aged 34, who was admitted under my care at the General Hospital, Birmingham, on October 27th, 1915, having been under observation as an out-patient for two weeks previously. He had suffered from rheumatic fever at the age of 19, and had had an attack of gonorrhoea at the age of 25. Otherwise his health had been good down to within a few months. There was nothing in his family history of any note.

History.

About four months ago he noticed that almost every night he was kept awake by a pain in his right eye, giving rise to the sensation "that his eye was being pulled out." During the day very little was noticed, but towards evening he experienced shooting pains. About a month later he noticed the right eye becoming prominent. He then sought advice at a local hospital. Since then his condition had grown worse, until he was unable to open the right eye properly. He described his head as being "muddled at times." He stated that he had never seen double.

Physical Signs.

There was a moderate degree of right exophthalmos, and the eye was also displaced downwards and a little outwards. There was considerable though not complete ptosis, the frontalis muscle being used when an attempt was made to open the eye. The roof of the orbit appeared to be filled in, and lower than normal. It was firm to touch and not painful.

Corneal sensation was good, and the pupil reactions normal in all respects. Sensation was not quite normal over the area supplied by the supraorbital nerve.

The right fundus showed marked optic neuritis with a fair degree of swelling; there were some retinal haemorrhages in the region of the disc, and the retinal veins were engorged. The left fundus showed early optic neuritis; the upper and lower edges of the disc were blurred and a little swollen, and there was a retinal haemorrhage near the upper part of the disc. The optic neuritis was of the increased pressure type.

* Hippocrates flourished in Greece in the fifth century before Christ. Among other discoveries, he announced to the world that the bald were not usually afflicted with varicose veins (*Aph.* vi, 34). He also presented the Royal College of Physicians of London with a motto, which many read and few understand. Indeed, the most plausible translation was one made by a disappointed Fellow. It was as follows: "The patient's life was short; but then the surgical technique was great!"