Case of Jaundice, Bilious Concretions, and the Passage of a large Gall Stone. By Dr ARTEMAS JOHNSON.

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ON the 22d of October, 1822, I was called to visit J. H. of Smithfield, (R. I.), aged 72 years, who had been ill for several weeks, with what he termed, (and very appropriately,) a bilious disorder. This gentleman, being of the denomination of Friends, and in affluent circumstances, had lived of late years rather a sedentary, though a remarkably temperate life. Being of a studious habit, possessing a pretty strong mind, he had, in the course of his reading, bestowed considerable attention on the study of diseases and medicine. His faculties being but little impaired, he was able to give a more accurate history of his own case, than can generally be obtained from a sick patient. He informed me that for many years, he had had frequent attacks of colic, produced, as he supposed, by his bilious habit; but had generally been able to get relief by his own prescriptions without the aid of a physician. Rhubarb, castor oil, enemata, &c. had frequently afforded relief; but he was obliged, at some times, to have recourse to emetics and to calomel.

For several days previous to my calling on him, he had been using the above remedies, but without producing their former effect, or the least alleviation of his sufferings. At this time, he had nausea; continued pain in the epigastric region; a brown, dry tongue; the pulse 110 in the minute, not full, or indicating any great degree of active inflammation; the skin dry, and exhibiting the sallow appearance, usually noticed in confirmed bilious cases. His appetite had been poor for several weeks past. For the last 3 or 4 days, the stomach had been able to retain but very little, even of liquids. He was persuaded, that nothing had passed from the stomach through the intestinal canal for at least 3 days, and was under the impression, that a lesion or rupture of the intestine had taken place, through which if any thing did pass, it must of course go into the abdominal cavity.

Taking into consideration the patient's own history, and the existing symptoms, I was fully satisfied of a *morbid* state of the liver and its functions, and aware, that, unless speedy relief could be afforded by active means, he could survive but for a short time. I consequently directed a large blister to the epigastric region; from 8 to 10 grains of the S. M. Hydrargyri to be given, and if without effect, to be repeated in three hours,

followed each time by an infusion of senna, and the sulphate of Magnesia, and assisted by frequent enemas: fomentations to the abdomen were also applied.

Viewing the patient to be in imminent danger, I suggested a wish, that Dr Wheaton of Providence, might be called in consultation the next day, which was agreed to.

23d. Met Dr W.; found the patient much as yesterday. No evidence of an operation of the cathartic ordered yesterday. A little feculent matter only, was returned with the enemas. He had vomited considerably; pain continued; the pulse, appearance of the tongue, &c. indicated no change for the better. It was concluded to persevere in our efforts, to remove the obstruction, whatever the cause might be, by a further use of cathartics. A pill composed of equal parts of the S. M. H. and Jalap was ordered to be given every two hours; the infusion of senna, enemas, &c. continued as yesterday. He was still confirmed in his belief, that a rupture of the intestine had taken place, through which was a passage out of the natural course. From this impression, Dr Wheaton, as well as myself, endeavoured to dissuade him, as there was no particular symptom to warrant such a conclusion, the abdomen being but little if any more tumid than natural. We left him with an appointment, that Dr Wheaton should meet me again at nine o'clock the next morning.

24th. This day Dr W. being out of health, sent his partner in business, Dr Parsons. We met at the time appointed, and found our patient with more aggravated symptoms. The pulse over 120 in the minute, though feeble. The tongue very dark and dry. No effect from the cathartics, &c. ordered yesterday. He had vomited frequently, a dark, offensive matter, and had failed much in strength. Every hope of his recovery seemed now abandoned by an anxious family. The patient still retaining his faculties of mind, was rather opposed to persevere longer with cathartics, and indeed we neither of us felt much confidence in their further use; he however, expressed a wish that something farther might be attempted for his relief. We were now of the opinion that the obstruction was in or near the duodenum; and whatever the cause might be, we could not consider ourselves warranted in persevering longer with cathartics. If it was a Schirrus of the Pylorus, or its neighbourhood, we had no hope of affording, even scarcely a temporary alleviation. But from the symptoms, we felt ourselves justified in referring the cause to bilious concretions, either formed in the stomach, (cases of which I have seen,) or in the gall bladder, passing, or having passed the ductus communis. The stomach

being considerably distended, the contents of which were extremely offensive, we concluded to direct several doses, composed of Ipecacuan. 10 gr. Tart. Antimony, 3 gr. to be repeated, if required, not merely with a view of evacuating the stomach, but chiefly with a hope, that a more powerful effort, produced by the emetic, might accomplish the expulsion of the obstructing substance.

We agreed to visit the patient the next morning, though with but slight expectation of his surviving for the twenty-four hours.

25th. We called as per agreement, and much to our satisfaction, found the patient greatly relieved apparently in a pretty comfortable condition. We learned that the first dose of Ipecac. &c. as mentioned above, was ejected without producing any sensible benefit. A second portion was given, and the third in a short time after. This proved powerfully emetic, by which much offensive matter was ejected. He observed that while in a strong effort of vomiting, he was sensible of something giving way suddenly in the stomach, or upper part of the intestine. Soon after this he had a copious evacuation of the bowels, followed shortly after by several others. The pain, nausea, and vomiting had ceased, and no unnatural fullness of the stomach or bowels remained. Though weak, he appeared greatly relieved. The tongue moist, coat loosening; a partial ptyalism had taken place from the S. M. Hydr.; no unnatural degree of thirst; the pulse had come down to 85. He was able to take and retain, gruel, rice-water, &c. His febrile symptoms being slight, we prescribed simply small doses of Spt. Nit. Dulcis, and Vin. Antim. to be given occasionally, with a light cordial diet.

26th. I visited him; to appearance improving; no sickness of the stomach; the bowels remained free; could take of gruel, rice-water, and a little wine, but no desire for other food. Treatment continued.

I did not visit him again till the 29th. No difficulty of the stomach or bowels had returned. In addition to his previous diet, he was able to take a little broth; but little increase of appetite, I therefore directed a slight tonic course. For some time after this, he continued gradually to improve, though he could take but little solid food, nor could he bear tonics so well as could be wished.

At this time I discontinued my visits, with an understanding that he should send for me, whenever he deemed it needful.

On the 22d of December following, (an interval of more than 7 weeks,) I was called for, on account of a complaint, which he supposed to be Piles or Hæmorrhoids. He stated he had

formerly been much afflicted with that difficulty, and had been relieved by scarification with the scalpel, or lancet. He informed me, that this tumour, or swelling had come forward very quick, as it was not more than 2 or 3 days since he perceived it, and was now very painful when at stool, obstructing the fecal discharges.

After some conversation, I concluded to make examination per anum. Placing him in a favourable posture, and directing him to make some effort downwards, I could discover nothing external, indicating the difficulty in question. On introducing the finger nearly its length, I discovered a very hard tumour, as nearly as I could judge of the size of a butternut. From its situation being nearly out of reach, I could not be certain whether it adhered to the intestine, but was under the impression, that it did not, as it did not appear to advance with the motion of the gut on making an effort downwards.

I therefore gave my opinion, that his complaint was not Hæmorrhoids. He, however, still persisted in his *own* opinion, and it was with much difficulty I could dissuade him from an immediate use of the scalpel. I observed that it was possible it would prove to be an extraneous substance, and by proper means passed off. In case it should be found to adhere to the intestine the operation would be both difficult and dangerous, and had better be deferred for a day or two at least, till something more definite, might be ascertained of its true character. I then ordered a frequent application of olive oil to the parts, emollient injections, and to keep the bowels free with ol. ricini.

The second day from this, after much pain and difficulty, he voided the *tumour*, which proved to be a large gall stone, the size and appearance of which will be given below. This was satisfactory evidence of the nature of his case from the onset. For a month after this, he had some prospect of recovering, had gained a little strength, though his flesh gradually wasted. The bowels had resumed their natural *movement*, though the feces not their natural appearance.

22d of January, 1823. This morning he was attacked with a severe ague, which continued for some time. A message was sent for me to visit him as soon as convenient; living at a distance of six miles, and being necessarily detained, I did not arrive till towards evening. The ague had subsided, I found him in a considerable degree of stupor. The pulse over an hundred, attended with heat and thirst, though the skin was a little moist; the bowels a little relaxed, I directed small doses of Ipecacuan. Compos. and Pulv. Antimonialis to be given

occasionally, with such nutritive drinks as he might be able to take.

I saw him again on the 24th. His febrile symptoms had subsided; no return of ague; but little thirst; the pulse had come down to 75; his appetite entirely gone; though his debility increased, he was exercised with no pain. I again resorted to tonics; among other things, the bark in different forms was recommended, but he was unable to bear them.

He continued to emaciate, and sink gradually till the 25th of February following, without pain or much apparent suffering, except that of debility. He had no cough; respiration perfectly free, and (what might have been expected under the circumstances of his case) he was free from any appearance of hectic fever.

Feeling much interest in the case, and extremely anxious for a full demonstration of the real state of the liver, and the manner in which this large substance found its exit from the gall bladder, I prevailed on the family for permission to examine the parts, post mortem. Accordingly on the 26th, Dr Parsons of Providence attended with me for that purpose, a particular description of which will be furnished by that gentleman.

Pawtucket, Nov. 27th, 1824.

Appearances on Dissection—with remarks. BY DR PARSONS.

THE abdominal cavity as well as the surface of the body was strongly tinged with yellow. On raising the liver and exposing the biliary vessels the parts were found so changed in structure that in their present situation, it was impossible to distinguish one from another. I therefore removed the liver, stomach, and part of the intestines from the body, and on laying open the stomach from the cardiac to the pyloric orifice, and continuing the incision into the duodenum, discovered a large opening in the side of this intestine, through which my finger could easily pass out toward the liver. In this passage I felt a hard substance extending into the gall bladder, and on cutting into it, found it to be an irregularly shaped mass of biliary concretions, slightly adhering together in the quantity of a table-spoonful. When this mass was removed the gall bladder seemed to be continued on in nearly a direct line from its fundus into the duodenum, but was narrowed near its mouth.

The biliary ducts were so involved in a mass of morbid structure as not to be discovered.

From all this it would appear that the gall stone which passed per anum, moved from the gall bladder into the cystic duct, perhaps the common duct, and was too large to pass through it; that it excited inflammation between the duct and duodenum, which produced adhesion and finally ulceration that made a passage for the gall stone into the duodenum,—that the act of vomiting from the emetics forced it along and thus afforded immediate relief, and that bile after this flowed through the new passage, which for a time aided digestion, and produced a state of convalescence;—that a relapse was the consequence of another biliary obstruction as indicated by yellowness of the skin, and clay coloured stools, and by the presence of a mass of calculi found, *post mortem* as above mentioned. But how these could form after so large an opening existed for the passage of bile, is not so easily understood. Perhaps the walls of the cyst, thickened as they were by disease, no longer retained their elasticity to force out all the contents, and that a part of it remaining, had, by the absorption of its aqueous part, become inspissated and concrete in the cyst, and finally obstructed the new passage.

Here it may be observed that the patient's sensations, so alarming to himself, and so absurd to our conceptions, were not without foundation. From the ulceration in the side of the intestine, an opening must have existed at the time he spoke of it, and if a sensation of aliment passing out of it could be felt in any case it might in this. I point to it here as a diagnostic symptom to be observed in future cases of a similar nature.

Dr Pemberton in his valuable treatise on diseases of the abdominal viscera, speaking of the use of emetics to force out gall stones, remarks, that "the mode by which a gall stone passes seems analogous in its effect, though not exactly in the peculiar process, to the mode by which a fœtus is enabled to pass from the uterus; for in this case the passage is prepared, and the propulsion is expedited by the contraction of the uterus upon the liquor amnii: by this the os uteri is so dilated as to allow a more enlarged passage for the fœtus. The cases agree as I imagine in this respect, that the passage for the exit of the solid body is prepared by the fluid surrounding the solid, and not by the solid itself.

"This idea of the passage of the gall stone may perhaps serve in some measure to explain the uncertainty in the power of emetics in forwarding a gall stone. We all know that the

effect of an emetic is not only to produce relaxation of the whole body, but also to increase the secretion of bile: this increased secretion of bile if its exit is prevented, will mechanically increase the distension of the duct, and thus will a passage be opened for the calculus. If this position be true, it will follow that an emetic cannot assist the expulsion unless there is a total stoppage of the duct; for without this, the bile would pass off and no distension take place. The frequent failure of emetics, in making any impression on the disease, sufficiently argues a modification of the complaint over which they have no power. This modification I take to be that state when the stone, in consequence of its angles, does not completely close the duct."

In the case above related, the gall stone that passed per anum, and which is now in my possession, has a smooth round surface, and therefore, according to Pemberton was well formed for propulsion by the act of vomiting. It is of an oval shape measuring nearly two inches in length, and bears some resemblance to an English walnut. On dividing it longitudinally with a small saw, I found it composed of concentric laminæ, thinner and harder near the surface, and its centre soft, of looser texture, and wearing a chrysalized appearance.

Pemberton says "the size of gall-stones, which have passed without destroying the patient, almost exceeds belief. I have in my possession the model of one, whose long diameter is two inches and a quarter, and whose short diameter is one inch and a quarter. The patient from whom this passed suffered for five months the most acute pain. From the magnitude of the stone, I should believe that ulceration (in consequence of inflammation) had taken place between the duct and duodenum, and that thus an aperture was made for the stone to pass into the intestines, as it is unlikely that the duct could admit of such distension."

What Dr Pemberton conjectured was verified in this case, as I am satisfied by a re-examination of the morbid parts, which I now have preserved.

For the consideration of those who may become Members of Legislatures.

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GENTLEMEN,

SUPPOSE the human bones, or the more recent subject, should happen to fall into the hands of some one, whose

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