CASE OF
STRICTURE OF THE ŒSOPHAGUS,

FATAL, TWO YEARS AND THREE MONTHS AFTER ACCIDENTALLY
SWALLOWING SOAP-LEES.

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Received September 2d.—Read November 13th, 1849.

THE following case appears to me to deserve attention, and to present some features of importance and interest, from its analogy to other recorded cases, in which a similar succession of symptoms and consequences have been observed.

Anne S., æt. 22, was admitted into Hallett Ward, Westminster Hospital, on July 16, 1847, suffering from great irritability of the stomach, frequent vomiting, and great prostration. The tongue was red, moist, and glazed. The pulse 84, small and weak; there was obscure tenderness or rather soreness of the abdomen, arising, apparently, from the frequent retching. There was no pain on pressure, except at the epigastrium. No tympanitis. Skin of natural temperature. Bowels not constipated. Deglutition painful, and followed by rejection of all ingesta, whether fluid or solid. Countenance expressive of exhaustion. She stated, that five days previously, she drank, by mistake, some fluid out of an old tea-pot, containing soap-lees, used in marble-polishing, (a caustic solution of impure carbonate of soda.) She did not swallow more than a mouthful, as she spat out the portion in her mouth on discovering her mistake. She does not appear to have suffered any pain at the time, or any other inconvenience, than the soapy disagreeable sensa-

tion in the mouth and pharynx, till near two hours after the accident, when severe vomiting commenced, which has continued, according to her statement, with but trifling intervals to the present time. She has had no advice.

The mucous surface of the tongue, cheeks, and pharynx, although red and injected, appeared merely denuded of epithelium; there was no indication of abrasion or ulceration.

An œsophagus tube passed readily into the stomach without any impediment, and without any more inconvenience than is usually experienced. She was ordered oleaginous laxatives and demulcents, calomel, and opium; a blister to the upper part of the sternum and throat; and milk and farinaceous diet. During the following twenty-four hours, the vomiting was less frequent; the medicines were retained, and deglutition became less painful and difficult.

On the 19th, three days after admission, pain was still felt at the epigastric region. The tongue had become paler and was moist. Deglutition was still painful, but the stomach had recovered its ordinary quietude and natural digestive powers: food and drink were retained; and a very marked improvement in her appearance was noticed. During the following week she steadily improved: complaining occasionally of pain at the superior margin of the sternum and between the shoulders; but the digestive functions appeared perfect. Appetite moderate; tongue of natural appearance; dejections healthy. She was discharged at her own request ten days after admission and fifteen after swallowing the alkali.

Eleven months from this period, on June 8, 1848, she was again admitted into the same ward, suffering from very urgent dysphagia. She was emaciated and weak, and looked like one half-starved. She stated, that for many weeks she had not swallowed any solid food, living on arrow-root, gruel, and broth; and that for the last eleven days, the difficulty of swallowing had become so great, that even fluids returned after being retained for a space, appearing to go no further than a spot to which she pointed at the edge of the sternum, and then coming back into her mouth. She stated also,

that a few weeks after she left the Hospital last year, she began to feel, occasionally, a difficulty in swallowing solids; that from time to time this inability increased, till she became content to live on spoon-food; that she always hoped it would get better; that she did not apply for relief from fear of losing her work; that during the last four weeks, the difficulty of swallowing had rapidly increased, and that for the last eleven days every species of ingesta came back again. She described her sensations of hunger and thirst as most intense and poignant,—the sight of food exciting the most distressing craving, rendered doubly distressing by her abortive efforts to swallow. The tongue was clean and moist; the pulse small and weak; excretions scanty, but natural; face pinched and emaciated; countenance expressive of distress and anxiety. The oesophagus was examined with a small gum elastic catheter, No. 8; some trifling obstruction was felt at a point corresponding to about an inch below the circoïd cartilage; about an inch and a half or two inches from this spot, an impediment to the passage of the instrument presented itself, which it required steady and prolonged pressure to overcome. Beef-tea was injected to the great relief and comfort of the patient; who expressed in grateful terms the sensations of refreshing, glowing warmth, this supply of food imparted to the stomach, to which, in equal quantity, it had been for some months a stranger. A little port wine was subsequently injected. The catheter was passed again on the following day, but she was able to swallow beef-tea and arrow-root unassisted. The appearance of the patient had undergone a remarkable improvement; and her haggard look had passed into an expression of cheerful repose. A tube, gradually increasing in size, was passed daily. Deglutition improved, so that she readily swallowed every kind of fluid nourishment; but she could not obtain a passage for any solid portions of food.

On the fifth day from her last admission, an unsuccessful attempt to pass the tube through the lower stricture was followed by considerable pain about the pharynx and gullet, and also at the upper margin of the sternum and between

the shoulders. These symptoms yielded to blistering and taking calomel and opium; the tube was passed in the evening. The power of deglutition again improved; she increased in flesh and strength, and was made out-patient June 30, but neglected to attend: and about three weeks afterwards, July 18, was re-admitted, with aggravation of symptoms; pain referred to the sternum and between the shoulders. Blistering afforded relief. The tube was passed daily, and she recovered the power of swallowing fluid nourishment; but the state of the stricture would not admit of any increase in the size of the œsophageal bougie, as an instrument exceeding in size a No. 8 catheter would not pass. At the end of August she was made out-patient; and during the latter months of the year, was employed as one of the nurses in the Hospital. During this period, she was not able to swallow solids; this was subsequently ascertained, as she was not subject to any treatment while acting as nurse. She left in January.

On the 10th of September, 1849, she applied for admission for the fourth time; and now her symptoms and sufferings had assumed a more aggravated character than on any former occasion. She was much attenuated; there was extreme prostration; eyes sunken and hollow; countenance depressed and anxious; pulse small and weak; tongue white and moist. She stated, that for some weeks past the difficulty of swallowing had rapidly increased, and that within the last few days, everything she attempted to swallow was returned. She complained of much pain at the upper part of the sternum. The bougie met with some trifling obstruction at the upper third of the gullet, just below the circoid cartilage, which moderate pressure succeeded in passing; but on reaching the stricture below this, it could not be passed. The smallest sized wax bougies were ineffectually tried. Warm-baths and opium enemata were unavailing in allowing the instrument to pass. Blisters were applied; mercurial inunction tried; nutritious enemata injected up the rectum; nourishing fluids passed into the œsophagus, in the hope that a small portion might filter through if the stricture was not

completely impervious. Her sufferings from hunger, exhaustion, and thirst, were most pitiable and distressing; warm-baths temporarily relieved the latter. The stricture was situated so low in the œsophagus, that all hope from surgical assistance was unavailing. Incoherency and delirium supervened, and death from exhaustion and inanition put a period to her sufferings on 19th September, 1849.

Post-mortem examination.—Body emaciated to the last degree. The pulmonary and abdominal organs healthy. The stomach contracted and empty; mucous membrane pale and corrugated, contained soapy mucus; small intestines contracted and empty; large intestines distended with flatus.

On opening the œsophagus, the pharyngeal or upper third of the tube was much dilated and pouch-like; the mucous surface being puckered up into folds. The coats of the tube in its entire length were much thickened, the mucous and muscular coats particularly above the first stricture. At a spot corresponding in position to about an inch below the cricoid cartilage, was the first stricture; a black bristle passed horizontally in the preparation¹ indicates its position: just below this, on the left hand, is the cicatrix of an ulcer about the size of a sixpence. The tube dilates again, and then contracts to about the diameter of a No. 8 catheter for nearly three inches, when it suddenly closes, and presents the appearance of complete obliteration of the canal; and a probe could not be passed from above downwards; a passage could be obtained only by passing the probe from below upwards. A black bristle passed vertically marks this stricture: the hollow spaces just above this stricture arise from the accidental tearing of the thickened muscular coat from the contracted portion of the tube.

The thickening of the walls of the gullet are seen to commence just above the first stricture, and to continue to the lower one, below which the œsophagus resumes its ordinary character. The larynx and trachea to the bifurcation have

¹ The preparation is in the museum of the Westminster Hospital.

been left, to show the relative position of the constricted and diseased portions of the canal.

This case affords an example of the succession of structural changes, slowly developed, and proceeding for a time without any very urgent symptoms, which may be expected to follow accidental swallowing of the caustic and carbonated alkalies. The same order of symptoms and similar pathological conditions of the œsophagus have been observed before, and seem common to all these cases. Inflammation is first excited; an impediment to perfect and easy deglutition is the consequence; every effort of swallowing is accompanied by pains and distress at the inflamed portion of the gullet. This inflammation is constantly renewed and maintained. Stricture follows; difficulty of deglutition results; increased obstruction perpetuates the inflammatory condition, surrounding textures become thickened; the stricture continues to increase, and finally becomes impassable; and the miserable patient at last dies, less from the morbid process itself, than by want of nourishment, or craving hunger and insatiable thirst continued unrelieved, and these, mocked by the ineffectual efforts for their relief, consign the poor sufferer to incoherency and delirium, and death ensues. And thus the fabled torments of the Lydian king for his filicidal impiety become virtually realised in the sufferings of modern humanity:

*"Nec bibit inter aquas, nec poma patentia carpit
Tantalus infelix! quem sua fata premunt."*

These accidents from swallowing soap-lees have been more frequent than is generally supposed; and, what is worthy of note, have, as far as the recorded cases enabled us to judge, uniformly produced like effects, if the patient has survived the accident for any length of time.

Sir Charles Bell¹ mentions a case of fatal stricture of the œsophagus, in which the patient died literally starved, who had accidentally swallowed soap-lees twenty years previously. And, again, in the same volume, that of a child who, in its

¹ Surgical Observations, vol. i, p. 80.

mother's absence, swallowed soap-lees, which produced inflammation and subsequently impassable stricture and total obstruction of swallowing. He gives plates of the morbid conditions of the œsophagus in these two cases, and relates a third case of a woman brought into the Middlesex Hospital, who had swallowed soap-lees, and who died of mortification of the gullet.

Mr. Cumin¹ has recorded a case of stricture of the œsophagus from swallowing a strong ley of American potash, mistaken for treacle. This case was successfully treated for stricture of the gullet by bougies, but required unremitted attention for ten months to restore deglutition to its healthy condition.

In the 'Edinb. Medical and Surgical Journal,' vol. xxx, p. 310, Mr. Dewar has recorded a case of fatal stricture of the œsophagus, and death by inanition from swallowing a strong ley of carbonate of potash, which in its details is remarkably analogous to the case now read to the Society. In a month after the accident, the inflammatory symptoms having subsided, the stomach retained ingesta. She was an intemperate woman, and after a night spent in drinking the first relapse took place. The dysphagia became very urgent: leeching, fomenting, and blistering, were resorted to; the bougie passed, and she recovered the power of swallowing. She suffered several relapses, seven in all; her strength gradually failed, and she died starved, being unable to swallow anything. The œsophagus was found thickened in all its coats, and contracted in its caliber, throughout the whole extent. The stricture was seated about two inches above the cardiac orifice, where it became so narrow that a probe could be scarcely passed: in several places the mucous membrane was destroyed by ulceration. These anatomical conditions are remarkably exemplified in the preparation before the Society.

The practical question, in considering these cases, is whether any other mode of treatment than that adopted, could be expected to avert these distressing and fatal consequences,

¹ Edinb. Med.-Chirurg. Transactions, vol. iii, part ii.

which appear almost uniformly to follow these accidents of swallowing the caustic and carbonated alkalies. The propriety of treating these cases, in the first instance, for inflammation of the gullet cannot, I think, be questioned; and leeching, blistering, and calomel and opium, when deglutition can be accomplished, are successful in relieving the earlier morbid conditions. But so soon as these are controlled, and before any positive symptoms of dysphagia present themselves, I should, in any future case, commence at once the daily use of an œsophageal bougie, and continue its daily employment for months, even in the absence of any symptoms for its necessity.

It will be observed, that in these cases, weeks and months often elapse without any palpable symptoms indicating any conditions favorable to the existence of stricture. There must, however, be some morbid circumstances progressively in operation, slowly, though imperceptibly, laying the foundation for the most hopeless stricture of this canal. No means appear to me so efficacious to avert this calamity, as the frequent, I would say daily, employment of the bougie; and, however troublesome or unnecessary it may appear to the patient, the example of these cases should convince us, that nothing but persevering in this course of treatment, can promise any chance of escaping the terrible consequences of organic stricture of this canal.