and contained a good deal of mucus. He had had frequent calls to micturition in the night; the urine, however, coming only in drops. He had slept but little, and felt very uneasy. The pulse was 90; the tongue pale and furred. He was ordered to take at night five grains of the compound soap pill. A diaphoretic mixture, with hyoscyamus, was also ordered to be taken during the day.

July 19th. He had slept a little after the pill, but was very uneasy this morning. The urine was, if anything, more loaded with mucus, mingled with lithates. It had an acid reaction on litmus. The compound soap pill at bed-time was repeated; and he was ordered to take some castor oil in the morning.

July 22nd. He had taken the pill each night; but on this day, notwithstanding the sedatives, etc., the tenderness of the perineum had increased, and the pain in the bladder was greater, accompanied with smarting, and extending through the pelvis and hips. The effects of irritation on the general system were also more marked, and accompanied by flushes and slight rigors; and a tendency to low fever seemed rapidly setting in, whilst the bladder was assuming that state of chronic inflammation which so soon gives rise to the acute form, reversing, as it does, the ordinary course of inflammation. I prescribed as follows:—

R. Pulveris Doveri,
Sodæ sesquicarbon.,
Potassæ nitratis, aa gr. v. M.

Fiat pulvis 4tis horis sumendus.

July 24th. Since the 22nd, he had taken the last prescribed medicine regularly, with veal broth and barley water, freely as diluent. In some respects he had been relieved.

From the very frequent calls to micturition, it had been found necessary to keep the catheter constantly in the bladder, though removed each day. The long coils had, no doubt, by its being frequently passed, been one cause of keeping up the irritation of the mucous membrane of the bladder, and more especially of the prostate; both these organs being at all times, under such circumstances, exceedingly liable to become irritable. The urethra also was discharging mucus, and one of the testes had begun to swell.

Under these circumstances, I resolved to try the effect of a vulcanized India-rubber catheter; and I procured some small tubing of that substance for the purpose. I then placed *within* one extremity the end of a catheter, cut off for the purpose, and about an inch and a half long, snipping out a small piece of the tube corresponding with the eye of the inner piece. The extremity was then carefully closed, cemented, and smoothed. When well greased, it passed, without much difficulty, on a stiff stilette; and was not removed for a week. By the injection of warm water, the tube was easily kept free from mucus or other obstruction.

In a few days, under the use of anodynes, beef-tea, arrow-root, and wine, etc., he had so far recovered as to be able to walk in his garden, feeling but little inconvenience. The tincture of sesquichloride of iron was soon after exhibited; and he continued the compound soap pill for some time at night. Under the use of the iron and the catheter, the bladder soon recovered its powers. At the end of nearly two years, the patient is now hale, hearty, and well, for a man so greatly advanced in years.

REMARKS. In this case, the ordinary catheters seemed, by their firmness and the length of their coil, to produce irritation of the urethra and bladder, and, by their frequent passing, also of the prostate—all already so prone to it. From the comfort with which the vulcanized India-rubber tube was borne, the cessation of uneasiness and irritation, the facilities which it afforded the muscular fibres of the bladder to recover their tone, dilating or contracting as it does with each motion of the urethra, it was certainly of great benefit in this case. In one or two other cases in which I have adopted a similar instrument, it has fully answered my expectations. In cases similar to that which I have described, the vulcanized India-rubber catheter seems to offer great advantages.

Tewkesbury, Gloucestershire, March 10th, 1853.

CASE OF MALFORMATION AND COMPLICATED DISEASE OF THE URINARY ORGANS.

By SPENCER THOMSON, M.D.

THE accompanying drawing may interest the readers of the ASSOCIATION MEDICAL JOURNAL; in the first place, on account of the malformation which it represents, and in the second, as an illustration of the distinctly traceable effects of complicated disease.

A. Right kidney: ureter double.
B. Left kidney: vessels double.
C. Union of canals of double ureter.
D. Right renal vein.

E. Right renal artery.
F. G. Left renal veins, double.
H. I. Left renal arteries, double.
I. Opening of left ureter into thickened bladder.

The figure represents the kidneys, ureters, and bladder, taken from a young man who had suffered severely from stricture of the urethra. He subsequently became the subject of diabetes insipidus, and finally died in consequence of suppression of urine. The case occurred in the practice of Messrs. Tomlinson and Tome, of Burton-on-Trent, who kindly afforded me the opportunity of making the drawing from the parts.

On the right side, the enormously dilated ureter is double; on the left, there is a double set of renal vessels. The bladder, not larger than usual, is considerably thickened.

Unquestionably, the thickening of the bladder must have been directly occasioned by the stricture; and its dilatability being thus impaired, it must have become less than commonly adapted to accommodate the extra accumulation of urine, which the combination of diabetes and stricture necessarily involved. The confined fluid, consequently, must have been dammed up within the ureters; and to such an extent, apparently, had this

taken place, that these tubes were dilated to a calibre equalling that of the small intestines, which, indeed, they greatly resembled. Moreover, the valves of the kidneys were likewise much dilated, and the cortical substance diminished to a corresponding extent, for the glands themselves were not enlarged.

Haunton, Burton-on-Trent, March 1st, 1853.

CASE OF GLANDERS IN A FEMALE.

WITH REMARKS ON THE TRANSMISSION OF THE DISEASE FROM THE HORSE TO THE HUMAN SUBJECT.

By ARCHD. WM. COCKBURN, M.D.

CASE. Mrs. Slims, aged 52, wife of a cab-driver, was seen by me on Friday, 4th February, 1853. She had been in bed for nine days, complaining of feverishness and rheumatism. When I saw her, she had excessive pain in the extremities, especially the lower limbs. The ankles were red, swollen, and tender, but not glazed. On the right forearm there was an abscess the size of an egg. The body and limbs were covered with spots, some of a bright livid colour; others with pus; some like mere pimples; and on some parts there were patches similar to erythema. On the forehead, over the right temple, was an ulcer, or rather a cluster of vesicles injured by a blow since their formation. This ulcer was irregular and superficial, with dark, ragged, angry looking edges, and trifling discharge; it was about the size of a half-crown. There was much thirst and fever. The pulse was quick and small; the tongue dry and foul; the urine scanty and high-coloured; the countenance depressed and anxious. She had been slightly delirious the previous night, but was now sensible. She was ordered to take a mixture of acetate of potash, every two hours, and a pill of soap and opium at night. A poultice was applied to the forehead and arm, the feet and ankles were wrapped in cotton wool.

February 5th. She was much the same; had had some ease, and two hours' sleep after taking the pill. The feet were not quite so red, but still very painful. The urine was clearer, and more abundant. She had had one dark, offensive motion. She was sensible, and complained of pain in the stomach from the medicine. The acetate of potash mixture was changed for one with colchicum and hyoscyamus; and a pill with colchicum and conium was ordered to be given at night.

February 6th. During the night, a sudden discharge of very offensive dark-coloured pus took place from the nose, at half-past ten, A.M. She was drowsy all night, but was sensible when roused. She had not passed urine, unless in bed. The bowels had been moved once, and the motion was less offensive. The nostrils were dilated, and clogged with dark glairy matter; the throat was full of viscid phlegm, with difficulty of expelling it: the eyes were swollen and closed, with copious discharge. The pustules were abundant all over the body; none seemed to have burst, except on the forehead, where bruised. The pulse was weaker; the tongue moist, but coated; the arm better. The wool had not been removed from the ankles. The attendant said that the matter from the nostrils was peculiar and sickening. The patient was almost in a state of low delirium. The colchicum was omitted, and she was directed to take bark, with diluted hydrochloric acid and stimulants, also an expectorant.

Vespere. She was more sensible. The phlegm was very copious, but more easily expectorated. The nostrils were much dilated, and discharged a dark sanious fluid. The pustules generally appeared more suppurative; some over the chest were as large as a sixpence, full of pus, but without inflamed edges round them; those on the legs were in all stages; and the patches of erythema were very bright. The eyelids were closed, but she could open the right one. She had taken some porter. Bark and expectorant were continued, and the eyes were ordered to be well washed with warm water.

February 7th. She died at half-past two o'clock in the morning.

REMARKS. On my first visiting the patient, the state of fever, the severe pain of the joints, and the redness and swelling of the ankles, led me to think that she was suffering from acute rheumatism. I concluded that the pustules over the body were of the epidemic character that has so long prevailed, and that the occurrence of the acute rheumatism at the same time was merely accidental. The urine being scanty and high-coloured, I prescribed (what I have never found to fail in acute rheumatism) the acetate of potash every two hours, with a pill of soap and opium at bed-time. But this opinion did not satisfy me. There was an indefinable expression about the patient, and a varied peculiarity about the appearance of the eruption, for which I could not account; and I left her with the unsatisfactory conclusion that she was very seriously ill, and that I did not know what was the matter with her. As I passed through the stable (she lived in the loft) on my way out, I asked her husband if his horses, three in number, were healthy, and he said that they were so.

On the next day, her general appearance was in no way improved. She had a low typhoid look, and yet she was sensible and collected. The urine had improved: but as the general symptoms had not, I altered her medicine, and gave her colchicum with an anodyne.

On the third day, the sudden and profuse discharge of sanious matter from the nose; its peculiarly offensive, sickening odour; the dilated nostrils; the sudden affection of the throat; the swollen, discharging eyelids; with the more suppurative character of the pustules, at once induced me to set down the disease as glanders. Accordingly, I prescribed bark, with diluted hydrochloric acid, an expectorant, and stimulants. In the evening, my opinion was more confirmed.

The patient died about six hours after my evening visit.

I examined the three horses. They were all in sound health; their nostrils dry; their eyes free from discharge; they had no coughs; their coats were in good condition; *but one had grease in the near hind leg.* Though denied by the husband, there seems no doubt that the woman had washed this leg. The disease was not extensive, *but still it was a leg discharging matter.*

Her constitution seems to have been very susceptible of absorbing poison: for, two years ago, she injured her finger when attending as nurse on a patient with a suppurating wound of his leg, and she suffered much then from pustular fever and eruption.

In the present attack, she had been ill for eight days before I saw her. Farcy had preceded the glanders; though Professor Dick says "the two diseases are only modifications".*

Entertaining some doubts as to the possibility of the discharge from grease conveying glanders, I begged my friend Mr. Lizars to ask the opinion of Mr. Williamson, veterinary surgeon of Edinburgh, on this point. Mr. Lizars, in reply, writes to me thus:—

"I have read over your views on glanders to Mr. Williamson, who corroborates the greater part of them. He says that if you inoculate a horse with the matter from a leg affected with grease, or quittor, or foul sore, the horse will become affected with glanders. Therefore, there can be no doubt that the poor woman caught the disease from the horse's leg. Glanders often commence with farcy."

Two points in this case struck me as remarkable. First, as noticed by Dr. Graves,† "the variety of inflammatory actions observed in the skin"; second, as noticed by Dr. Ballard,‡ "the close resemblance in the condition of the nervous system to that in delirium tremens".

Kensington, March 10th, 1853.

* Manual of Veterinary Science, p. 85.

† Clinical Medicine.

‡ Lancet, 1850.