A CONUNDRUM BY WIRELESS

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The advent of wireless has in many ways lightened the great burden of responsibility that lies on the shoulders of the captains of all ships at sea.

Twenty years or so ago the captains of small ocean-going freight steamers with no surgeon aboard had to rely entirely on their own modest stock of medical and surgical knowledge for the treatment of members of their crews seriously injured or taken ill at sea. The compulsory fitting of wireless installations into all foreign-going cargo ships has changed all that. Nowadays a captain, faced by a puzzling medical case or a serious accident aboard his ship, does not hesitate to appeal for advice by wireless to the surgeon of the nearest passenger liner. If the two ships are within reasonable distance of one another and the case seems to be one demanding professional treatment, the captain of the cargo steamer may find himself relieved of his case altogether by actual transfer of it to the passenger liner's hospital. Otherwise, if the case is not serious and can be treated adequately enough aboard the freight ship, the passenger liner's surgeon will send advice by wireless, and may continue to do so for as long as the two ships remain in wireless communication with one another.

Thus it is that wireless has added a considerable amount of worry to the liner surgeon's life at sea, and has thrown on him an obligation that almost (if not quite) transgresses the shore code about "covering" unqualified practice.

I have myself been appealed to by wireless on a good many occasions now. Once it was my duty to go, in a ship's boat in mid-Atlantic, to the surgical rescue of a Furness Withy freight steamer's fireman who, some hours before and a hundred miles away, had had his arm torn off through the elbow-joint. Here I found the case had been treated on perfect "first aid" lines with a tourniquet round the upper arm and the wound cleaned antiseptically and beautifully dressed. On another occasion I was appealed to by a harassed skipper who wired "Have a sailor who has pulled his foreskin back and we can't get it forward again. What are we to do?" In this case the wireless operators of all ships within a thousand-mile radius must have been vastly amused, had they cared to transcribe my lengthy Morse reply, at finding themselves in possession of full information on the treatment of an acute paraphimosis!

It is my most recent experience, though, of the terrors of medical diagnosis and treatment by wireless at sea that has occasioned this article. The whole correspondence as set out below demonstrates very clearly, even when one's informant is intelligent, painstaking, and precise, how difficult it is to make a reasonable diagnosis. It has been said that a diagnosis is the shot made by the man who is most nearly correct. Well, failing to make a diagnosis at all, the unfortunate ship surgeon is then confronted by the difficulty of advising a course of treatment that will serve to meet the needs of the half-dozen or more disorders from which his distant and unseen patient may be suffering.

On October 23rd, in mid-Atlantic, my captain handed me the following radio message he had received:

FROM CAPTAIN OF "C——" TO CAPTAIN OF "LACONIA."
HAVE GIVEN MEDICAL ADVICE TO STEAMSHIP "DEPTFORD"
BOUND FOR ANTWERP. HE SUGGESTS TRANSFERRING PATIENT
TO YOU. URGENT.

Then followed a copy of the radio message sent by the captain of the *Deptford* to the surgeon of the *C——*:

PATIENT IS AN APPRENTICE, AGED 17. ILL SINCE OCTOBER 14TH. FOR PAST FIVE DAYS PATIENT HAS BEEN NORMAL DURING EACH DAY TILL 3.30 P.M., AT WHICH TIME SEVERE PAINS COME IN STOMACH, ACCOMPANIED BY SHIVERING AND VOMITING BILE, WITH COLD BREATH, AND TEMPERATURE RISING TO 105°-106° AFTER THESE SPASMS. PATIENT BECOMING WEAKER. WOULD LIKE MEDICAL ASSISTANCE IF POSSIBLE. OPERATED ON PREVIOUSLY FOR APPENDICITIS.

Accompanying these messages was a direct signal to us from the *Deptford*:

PATIENT NO IMPROVEMENT. AM TREATING ACCORDING TO ADVICE RECEIVED. AFRAID SURGICAL ATTENTION NECESSARY. CAN I OBTAIN ASSISTANCE FROM YOU?

After considering these messages I had the following reply wirelessed to the *Deptford*:

WE HAVE COPY OF YOUR ORIGINAL MESSAGE TO "C——" RE PATIENT'S CONDITION. PLEASE SEND NOW PARTICULARS OF YOUR RECENT AND PRESENT TREATMENT AND EXACT LOCATION OF PAIN AND DATE OF APPENDIX OPERATION. SHALL BE PLEASED TO SEND YOU ALL POSSIBLE FURTHER ADVICE. WEATHER HERE, STRONG EASTERLY GALE AND HEAVY SEA AND SWELL.

Late that evening we received the following additional information:

PRESENT TREATMENT, LOW DIET: ICE BY MOUTH: TWENTY DROPS OF LAUDANUM DURING TO-DAY. ENEMA GIVEN THIS MORNING: RESULTS SATISFACTORY. NO TROUBLE PASSING URINE. SAME TREATMENT PAST THREE DAYS. DURING SPASMS OF PAIN WE TRIED ICE TO STOMACH BUT PATIENT FINDS MORE RELIEF FROM HOT BOTTLE. PRESENT CONDITION AT 6 P.M.: TEMPERATURE 104°, PULSE 120, RESPIRATION 26. PATIENT'S TEMPERATURE WAS NORMAL TO-DAY TILL 4.15 P.M., WHEN PAINS RETURNED. SLIGHT CONSTANT PAIN IN LEFT SIDE OF STOMACH JUST BELOW RIBS AND SPREADING ROUND TO NAVEL. SPASMS RETURN WITH INCREASED SEVERITY EACH AFTERNOON. APPENDIX OPERATION ABOUT TEN YEARS AGO. SAME WEATHER HERE.

Here, certainly, was a conundrum. Was the case a surgical one? The captain of the *Deptford* believed it to be so. I guessed my colleague in the *C——* thought so too, hence the shifting of the messages from the *C——* to the *Laconia* as we were much nearer the *Deptford*. The transferring of an "acute abdomen" from one ship to another was going to be a great responsibility and an anxious one—probably even an impossible job—in the heavy swell that was running at the time. The mere lowering of a boat to go, with all instruments, dressings, and assistants, to operate aboard the *Deptford*, was going to be hazardous enough in itself. On the other hand, if the case were a medical one, what was the matter with the patient? Had the *Deptford* just been to some ports in, say, Central America where the patient might have become infected with some tropical complaint? The signs and symptoms detailed by the captain of the *Deptford* were unusually and most commendably precise, and were a fine testimonial to the painstaking way in which the patient was being watched and cared for. Many important pieces, though, were naturally and quite excusably missing from this puzzle picture.

As it happened, among our passengers was a British professor of surgery returning from a surgical convention in the United States. I sought him out and found him in the captain's company, where the three of us had a consultation on the case.

A specialist has been defined, unkindly, as being a man who knows more and more about less and less. He has also been defined as being a man who wants all your teeth pulled out before he makes another guess. In the present instance it was scarcely better than mere guesswork for any of us. The professor, regarding the scanty information with exclusively surgical eyes, opined that the case was a ruptured gastric ulcer that should be operated on the moment the man, then perhaps sixty miles away, could be got at. Regarding the information from the point of view of the general practitioner—for a ship surgeon has to be something of a surgeon, an all-round physician, and a bit of an aurist, oculist, alienist, dentist, dermatologist, dietitian, cardiologist, gynaecologist, neurologist, pathologist, laryngologist, midwife, "mortician," and many other things—I ventured to suggest that the

case might be a malaria. I got "pooh-poohed" by my captain for that, on the score that the patient was too young to have malaria.

In the end the captain was requested to send the following message to the *Deptford*:

YOUR EXCELLENT DESCRIPTIVE MESSAGE RECEIVED. OUR SURGEON CONSIDERS PATIENT'S CONDITION LESS UNSATISFACTORY THAN ANTICIPATED. HE RECOMMENDS CONTINUATION OF HOT APPLICATIONS TO STOMACH AND ICE BY MOUTH. STOP LAUDANUM AND GIVE DOVER'S POWDER, TEN GRAINS FOUR-HOURLY TO PROMOTE FREE PERSPIRATION. REPORT CONDITION AT NOON TO-MORROW.

The next day we received the following report:

TREATING AS DIRECTED. SLIGHT PAIN. TEMPERATURE 98.2°. PULSE 72. SIMILAR CONDITION DAILY. TEMPERATURE RISING ABOUT 4 P.M. IF NO CHANGE WILL TRANSFER PATIENT ASHORE AT THE FIRST OPPORTUNITY. WEATHER MODERATED. THANKS.

This, especially the drop in the pulse rate, seemed satisfactory as far as one could judge, while it served to strengthen my idea that the illness might be malarial in nature. Accordingly I sent the following reply:

THANKS FOR REPORT. IF THERE IS ANY POSSIBILITY OF PATIENT HAVING BEEN INFECTED WITH MALARIA GIVE QUININE TEN GRAINS FOUR-HOURLY.

To our disappointment we got no further messages from the *Deptford*.

On the *Laconia's* arrival at Liverpool this correspondence was reported to the company's medical superintendent. At my request he very kindly made inquiries of the Watts Shipping Company, the owners of the *Deptford*. He was sent a copy of the *Deptford* captain's first report to them from Antwerp. It ran as follows:

RE CADET B——. THIS LAD HAS GIVEN ME CONSIDERABLE ANXIETY DURING THE PAST 15 DAYS. I HAVE HAD HIM IN THE SHIP'S HOSPITAL, DURING WHICH PERIOD HIS TEMPERATURE HAS BEEN RISING IN THE EVENINGS TO 105, 106, AND ONCE TO 107, DROPPING AGAIN TO NORMAL BY MORNING. I RADIOED FOR ADVICE TO VARIOUS SHIPS AND THE NEAREST APPROACH TO DIAGNOSIS WAS GIVEN ME BY THE SURGEON OF THE "C——," WHO SAID ACUTE OBSTRUCTION OF THE BOWELS REQUIRING IMMEDIATE SURGICAL ATTENTION.

I HAD DECIDED TO LAND THE LAD AT FALMOUTH. HOWEVER, THE DAY PRIOR TO PASSING THERE, WHATEVER THE OBSTRUCTION WAS IT PASSED AWAY AND SINCE THEN HE HAS BEEN CONVALESCENT. I AM ARRANGING TO HAVE HIM THOROUGHLY OVERHAULED AT ANTWERP AND WILL ADVISE YOU LATER.

Well, this did not help to elucidate matters much. It gave us the satisfaction, though, of knowing that the patient had survived the treatment, anyway. The Watts Shipping Company subsequently forwarded a copy of a certificate given by a doctor in Antwerp. The doctor stated he had "attended the apprentice, who, in my opinion, has been suffering from enteric fever." Apparently that was only another guess, for no mention was made of any bacteriological examination having been made to confirm the diagnosis. The Antwerp doctor, though, had certainly had an advantage over the rest of us in that he had at least *seen* the patient, even though the patient was convalescent at the time.

The boy eventually reached England and came under the care of his own doctor. Here, in his own home and in the early days of December, the undoubtedly correct diagnosis of his complaint was made. In answer to subsequent inquiries of mine, the owners of the *Deptford* kindly informed me that, on that particular voyage, the *Deptford*, which had loaded in Wales, went to Alexandria and thence across the Black Sea to the Sea of Azov; thence to Boston and other ports on the east coast of the United States. She was on her trip from America when the apprentice was taken ill.

It will be seen from the foregoing that this case aroused in the minds of four medical men suggestions of such varying troubles as intestinal obstruction, malaria, some complication following an appendicectomy, typhoid, and ruptured gastric ulcer. What was the final diagnosis? I think the very best of diagnosticians, limiting themselves to a study of the wireless information supplied to the professor of surgery and myself on October 23rd, will have a very good excuse if they fail to name correctly the boy's complaint!

Nova et Vetera

TARANTISM IN THE SIXTEENTH AND SEVENTEENTH CENTURIES

The March number of *Aesculape*, devoted to mental disease in art, history, and literature, contains an article by Dr. Jean Avalon, entitled "Les Mordus de la Tarentule." It is probable that Ferrante Imperato was the first to mention the dangerous properties of the tarantula in his *Histoire Naturelle*, published in Naples, after his death, by his son in 1599. There were, it would seem, in those days tarantulas and tarantulas; a member of the family living in holes in the earth might bite, but not harm. But another member, called *Solofizzi* by the natives, was larger and black, and its bite was followed by a swelling. The symptoms of its victim recurred every summer, and there was no recovery, except through violent exercise, followed by fatigue and sweating. This cure was achieved by the playing of a guitar, which set the patient dancing and jumping till he was exhausted.

A century later we find much more circumstantial and picturesque accounts of the symptoms of tarantism and their treatment. In his *Dissertatio de Anatome, Morsu et Affectibus Tarantulae*, published in Rome in 1696, Baglivi stated that June was the month of the amours of the tarantula; it was also most venomous at this season. The seat of its bite became swollen, inflamed, and surrounded by a livid or black aureole. General malaise, anguish, profound sadness, and laboured breathing followed, the patient's voice failing him. There were seasons and places in which the tarantula ceased to be noxious. In the winter, for example, and in exile, it lost all its venom; and it became less dangerous when transported to the mountains. Information is lacking as to how this transport was effected and with what incidents in the process. Baglivi noted that the symptoms varied with the species; the most terrible was the tarantula of a bluish hue. It infused black, sad, and desperate ideas with its venom, the patient falling into a profound melancholy and seeking desert places, tombs, and sometimes committing suicide. Other victims indulged in wild freaks of the imagination, plunging into mud with delight. The bitten woman, losing all restraint, delivered herself of screams and her own clothing without any shame, abandoning herself to the most impudent debauch. Others fell into a state of profound stupor, dying unless promptly treated. In such cases Baglivi found he had to break with all the art of Aesculapius, which was impotent, and to take refuge in the art of Orpheus, a concert being more effective than the whole bag of tricks of the pharmacist. The musician who was summoned played different airs on his instrument, until he found the one which gradually drew the patient from his lethargy, animated him gently, making him move his feet and hands and finally get up and dance. But woe betide him if a false note was struck; he would then become troubled, shudder, and relapse into his former state. Four or five days of such dancing treatment were usually sufficient to cure the patient, but only temporarily. He was subject to relapses once a year on the same day, and even the same hour.

Later writers took up the tale where Baglivi left it and embellished it further, discovering that the subjects of tarantism found certain colours agreeable and others not. The disease lasted only as long as the tarantula lived, and it danced to the same air that appealed to its victim. The patient would be asked in exactly what locality he had been bitten, and the colour of the offending tarantula. His friends would then hie them to the spot, play various tunes, and note that the tarantula which responded by dancing to a specific tune possessed the colour indicated by the patient.

Fielding Garrison, in his *Introduction to the History of Medicine*, notes that a description of tarantism is given by Athanasius Kircher in his *Magnes Sive de Arte Magnetica* (1643).