

of fog-signal codes in the September (1888) number of the nautical magazine already quoted from. He says that it is not necessary to denote the course taken if the signals indicate what is being done with the helm, and then he goes on to say: "If I am steering through a dense fog and hear a whistle ahead or on the port bow, I at once put my helm hard-a-port and blow one blast. If I hear a whistle on my starboard, I put my helm hard-a-starboard and blow two blasts." Here the writer asserts that the direction from which a sound comes can readily be made out so as to justify immediate action. A similar statement is made in an article on fast steamships in the June (1888) number of the *North American Review*. So far from this being the case, we know from experience, physiology, and acoustics, popularly exemplified in ventriloquism, that the direction from which sounds proceed is difficult to ascertain. The difficulty is increased in fog and darkness, when hearing loses the assistance of other senses and has no previous knowledge of the position of the sound's source. It does not take much knowledge of acoustics to know that density of fog, layers of varying density in the atmosphere, direction of wind, echo or reflexion of sound from sails, masts, and funnels, together with a host of intricate external influences, all combine to change the direction of the transmitted sound. But if these difficulties are present with the normal ear, how much more likely if the officers or seamen are dazed from want of sufficient sleep or from long hours of nervous tension through continued anxious watching. Suddenly aroused from insufficient sleep, seamen come from a warm cabin to the cold deck or bridge, where they are for many hours exposed to all weathers, often in damp clothing. This long list of difficulties takes on its most serious aspect when we come to study the pathological conditions likely to prevail. We may find wax, growths, or foreign bodies in one or both ears, giving inequality of hearing. We may find otitis, otorrhœa, thickened membranes, Eustachian difficulties, syphilitic or other disease of the bones, affections or diseases of the nerves, or, in fact, deafness or defects in hearing on one or both sides from any cause whatever.

Very much more might be written on the hearing of seamen, but the aim of this paper is to direct attention to the subject on lines capable of being enlarged, to suggest further investigation, and to show that only men of normal hearing and a proper understanding of their power, should be entrusted with lives and property, which might often depend on the sense of hearing alone for safety in the most dangerous of all the perils encountered at sea.

Liverpool.

TWO CASES OF ACUTE LEAD POISONING DUE TO HOME-MADE WINE.

By GEO. H. ALLDEN, M.B.

CASE 1.—A married woman, aged about thirty-five years, the wife of a farm labourer, living in a semi-detached cottage about seven miles from Southampton, sent for me in the autumn of 1885, and said that she had miscarried at about three months four days previously, that the pains had not subsided but had become worse, and that for the last three days she could keep nothing down, but had brought up continually large quantities of bile. She stated that she had been attended by a doctor for the last week, and, as she got no better, had told him she should call in someone else. On questioning the woman, I found that the bowels had not been relieved for nearly a week, and that there had been little or no discharge since the miscarriage. There was no great tenderness on palpation over the abdomen, which was retracted; temperature subnormal, 98°; pulse thready and slow, 68 per minute. There was a pan by her side containing nearly a gallon of green bile, which she had vomited at intervals during the past twenty-four hours. She had the cachectic appearance of saturnia, and a blue line on the gums at the junction with the teeth. Her husband worked with horses on the farm; she did house-work only; but, on examining the gums of her husband, I found the same blue line. In no way could I ascertain that either had been exposed to lead from paint or otherwise. The cooking utensils were free from verdigris or solder, the well water which supplied both cottages gave no trace of

lead on analysis, and the only doubtful article of diet was some home-made red-currant wine which they had first broached some ten days previously. The wine, I ascertained, was made in a large earthenware pan, highly glazed inside, and on testing the wine considerable quantities of lead were found. The woman made a good recovery after the bowels had been well relieved by enemata and purges. The husband had an acute attack of colic with vomiting two days after my first seeing him, which quickly subsided under the foregoing remedies.

CASE 2.—A farm labourer living at Wyfold, six miles from Henley-on-Thames, sent for me on Dec. 30th, 1888, for what appeared to be a sharp bilious attack. He was vomiting a great deal of green bile, and complained of severe colic. His temperature was normal. The vomiting was soon relieved by a calomel purge followed by an alkaline mixture, and he resumed work in a day or two, though still complaining of occasional abdominal pain. On Jan. 17th, 1889, I was again sent for, and found that the bilious vomiting and colic had returned with great severity, and that the bowels refused to act in spite of several doses of castor-oil which had been administered. On this occasion a distinct blue line was observed along the margin of the gums at their junction with the teeth, and, on examining the gums of his wife, a similar line, though not so marked, was detected in her. The wife, although she complained of headache, and appeared very pale and cachectic, had no other symptom of plumbism. No trace of lead could be found in their drinking-water, and neither of them in their occupations came in contact with lead or paint; but, on inquiry, I found that on various occasions, and notably about two or three days before his attacks of vomiting and colic, the husband had taken nearly a pint of a dark-coloured cherry wine, which had been made, as in the previous case, in a glazed earthenware vessel. His severe symptoms persisted on the last occasion for several days, accompanied by great prostration and low muttering delirium; and the constipation was not relieved till after repeated enemata and frequent doses of a mixture containing sulphate of magnesia, dilute sulphuric acid, and tincture of belladonna. The following are the results of tests applied to the cherry wine:—Sp. gr. 1040; reaction very acid. From twenty ounces of wine, sulphuric acid threw down a dull-white precipitate, which, when well washed and dried, weighed twenty grains. This precipitate was readily soluble in an ammoniated solution of tartaric acid, insoluble in hydrochloric, nitric, acetic, phosphoric, and sulphuric acids. With iodide of potash the precipitate immediately gave the brilliant yellow colour of iodide of lead. It therefore follows that four gallons and a half of this wine would yield nearly an ounce and a half of the sulphate of lead.

I have reason to believe that this cause of lead poisoning is by no means rare amongst the poor and thrifty in those counties where fruit is plentiful; and to obviate this danger the manufacturers of these pans with litharge glazing should be compelled to insert a permanent legible caution inside the vessel against its use for fluids containing those acids likely to dissolve out the lead.

Henley-on-Thames.

PHENOL IN ENTERIC FEVER.¹

By FRANK M. POPE, M.B. CANTAB., M.R.C.P.,
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AT the present time, when every week, almost every day, brings its new drug, each in turn praised as being the greatest discovery of modern therapeutics, it is of importance that any facts which contradict already published opinions on the action of any drug should be as widely circulated as the original statements.

In a paper published in THE LANCET of June 22nd, 1888, Dr. F. S. Gramshaw reported having treated 116 cases of enteric fever with phenol combined with tincture of iodine, without a single death. He stated that he was led to employ it from the account by Dr. Rothe in the *Deutsch. Med. Wochens.* for 1880, and ascribes to it the power of lowering the temperature and of exercising a beneficial effect on the ulcerated patches in the intestine. Dr. Gramshaw recommends the following to be taken every four

¹ Read before the Leicester Medical Society

hours: Phenol, 1 gr.; tincture of iodine, 1½ gr. He says that the patient becomes more comfortable after its administration, and that the disease runs a mild course, free from complications. It may be remarked here that in the cases which Dr. Gramshaw quotes at length, in which the temperature certainly appears to have fallen after the phenol was given, it was commenced about the beginning of either the third or fourth week, periods when defervescence not unfrequently commences under the expectant or other treatments.

These results appeared remarkable, more especially as it seems the almost unanimous opinion of the recognised authorities on enteric fever that while hygienic and dietetic measures, combined with good and careful nursing, have the most favourable influence on the disease, yet that treatment by drugs has little or no effect on the percentage mortality of any epidemic. As phenol is a powerful germicide, and also, as might be expected from its affinities with resorcin and salicylic acid, and more remotely with antipyrin, has some antipyretic properties, I resolved to try it, and commenced its use in July last, and, finding it to have at any rate no bad effects, continued to prescribe it in every case under my care till November, when I became convinced of its inutility. The cases were all in the wards of the Fever House attached to the Leicester Infirmary, and were under most favourable conditions with regard to air space, sanitation, and especially nursing. Phenol was given in twenty-two cases; twenty, or 90 per cent., were under twenty years; seven of these, or 30 per cent., under ten years. Thus a large proportion were of the ages at which as a rule the disease runs a comparatively mild course. The drugs were given in the doses recommended above. It was well borne, and was not unpleasant. The urine in all cases had a greenish tinge, but no hæmaturia was produced. The only effect that was perceived was that in some cases the morning temperature was lower (0·4°—0·6° F.) in proportion to that of the evening than was the case in patients who were not taking the phenol.

Two patients died, one from bronchitis and probably pneumonia, the other from perforation and consequent peritonitis. Besides these, three had relapses. The average stay in hospital of those that recovered was forty-eight days. The average time from the onset of the disease till the temperature had regained the normal and remained there was thirty days. Anyone familiar with enteric fever can judge from this whether the drug appreciably shortened the course of the fever. The fetor of the stools was entirely unaffected. Considering these cases with those in the institution during 1887, at the beginning of the same outbreak, the following table speaks for itself:—

	No. of cases.	Died.	Percentage of deaths.	Relapses.	Percentage of relapses.
Treated by phenol	22	2	9·1	3	14·1
Not so treated	120	11	9·1	17	13·6

With reference to the large number of relapses, it should be stated that they have been observed to be unusually frequent during the last two years, not only at the Fever House, but generally in this district, and evidently the phenol did not affect the disease in this respect. As a result of the above facts, I have formed the opinion that phenol combined with iodine in the above doses has but slight effect on the temperature, and none on the percentage mortality, complications, or general course of enteric fever.

Leicester.

NORTH DEVON INFIRMARY.—A special Court of the Governors was held at Barnstaple, on the 26th ult., for the purpose of receiving the resignation of Mr. C. E. R. Pronger, a member of the medical staff, who was about to leave the town. Dr. Budd presided. The chairman said the question was whether they would decide to elect an officer in the place of Mr. Pronger. He had long thought that the circumstances under which they were placed were changed so materially, there being several hospitals in the surrounding towns, that they did not want so large a staff as formerly; that two surgeons were quite enough to look after the in-patients, and it would be a great improvement to elect two assistant surgeons to attend the out-patients. It appeared that the vacancy caused by the death of Mr. Henry Jackson, a medical officer, had not been filled. Considerable discussion ensued, which resulted in a decision to fill the two vacancies only, and the election was fixed for that day month.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ON ENDOSCOPY IN TUMOURS OF THE BLADDER.

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HAVING recently made use of the electric endoscope (Leiter's) in several cases, I can confirm what Mr. Hurry Fenwick said in his paper read before the Medical Society of London¹ with regard to the value of this instrument in the diagnosis, as well as in the treatment, of tumours of the bladder.

Case 1 was that of a man aged fifty-four, who suffered from hæmaturia, and also from symptoms due to the presence of a malignant stricture (epithelioma) of the rectum. On examining the bladder with the endoscope, an excavated ulcer, the size of a shilling, with a well-defined margin, was seen on the posterior wall, its dark-brown irregular base contrasting very vividly with the smooth, pinkish surface of the surrounding healthy mucous membrane. Close to it was a blackish nodule, the size of a pea, apparently another portion of the growth commencing to sprout into the interior of the bladder.

Case 2 was that of a man aged sixty-three, who for some months had suffered from slight and persistent hæmaturia, vesical in its origin, but without any very definite bladder symptoms. With the endoscope, a blackish, nodular, sessile growth, about the size of a walnut, was at once seen springing from the left side of the trigone and standing out in bold relief against the pink background formed by the healthy mucous membrane. Its surface was uneven and devoid of villousities, but in places small whitish shreds, apparently particles of adherent fibrin, were distinctly visible, floating in the fluid and waving to and fro with every movement of it. From its appearance it resembled a sarcoma rather than a papilloma or epithelioma. To confirm the diagnosis, a small lithotrite was introduced into the bladder and passed down to the spot where the tumour had been seen with the endoscope. The blades of the lithotrite were then turned towards it, and gently opened and closed. On the second attempt, a piece of solid growth, the size of a pea, was brought away with the instrument. Examined microscopically, it was found to be a round-celled sarcoma.

Case 3 was that of a woman aged forty-seven, from whose bladder I had removed a small pedunculated sarcomatous growth sixteen months previously. As she was anxious to know whether there was any probability of the tumour recurring, I examined the bladder with the endoscope. Finding a perfectly healthy condition of the mucous lining throughout, and no indication of any return at the spot whence the tumour had been removed, I was enabled to assure her that she might now consider the cure as permanent.

In none of the cases was any difficulty experienced from the presence of bleeding, although in each the endoscope was retained in the bladder sufficiently long to allow of a thorough examination being made, and in Cases 1 and 2 also to permit a number of students, who were present in the theatre, themselves to obtain ocular evidence of the presence of the growths. In each instance the examination was made under anaesthesia. In Case 1 an intra-vesical injection of cocaine (one drachm of a 20 per cent. solution) was first tried, but the presence of the instrument in the bladder excited such constant spasm that it was impossible to make a satisfactory examination until after the patient had been anaesthetised. Cases 1 and 2 serve to illustrate the value of the endoscope in the early stages of vesical growths, when the symptoms are hardly severe enough or sufficiently well marked to justify digital exploration of the bladder; for, with the exception of hæmaturia, neither patient suffered from urgent or very definite bladder trouble. Case 1 shows how useful the instrument may prove as an aid to treatment, for the recognition of the extension of the disease from the rectum to the bladder was an additional argument in recommending colotomy as a preventive against the suffering and inconvenience which will probably accompany the subsequent formation of a recto-vesical fistula, if

¹ THE LANCET, March 16th, p. 534.