do not quite understand, unless the solution has been poured around a nerve of some size.

But I have never known the actual injection to be painful to any very objectionable degree. An infant, aged 2 years, may have 2 gr. of quinine thus administered in the fat of the buttock, and it will run off as if nothing had happened. Care must be taken not to inject the quinine endermically. Quite recently I have seen a case in which this was accidentally done, with the result that a piece of skin the size of a shilling sloughed out.

As to the efficacy of the method, I have no doubt that quinine thus used is more efficacious, dose for dose, than when administered by the mouth, while the cost of treatment is very much less, the patient is saved the misery of having to swallow a nasty draught, and the ordinary disagreeable symptoms of cinchonism are not developed.

But the praises lavished on solitary injections can only be the outcome of a very limited experience. For example, I have a temperature chart before me which shows that daily injections of 5 gr. for five consecutive days had no apparent effect on the course of the fever; the drug was then administered in 5-gr. doses thrice a day by the mouth for five more days, one hypodermic injection of 5 gr. of quinine being given on the fourth of these days, and the fever disappeared.

I have another chart of a case of most pronounced malarial cachexia, with anaemia, ague cake, and tachycardia, accompanied by great prostration and breathlessness. This is about the worse case I have seen recover. Five daily hypodermics consecutively given seemed to have stopped the fever, or, rather, greatly lessened the daily range of temperature, but in a few days the fever again set in. I again began with 5 gr. hypodermically, but the next day, as the fever showed no remission and the case seemed hopeless, the tachycardia being most distressing, while the patient sank into the too well-known condition of apathy, I injected 10 gr., continuing this for five days, when the temperature fell to 99°; thenceforward for five days more quinine was continued hypodermically in 5-gr. doses, with the result that the temperature rose no more, and the patient thereafter made steady progress. His last injection was on March 1st last. He is still in hospital, convalescence being well advanced. The palpitation has almost or quite ceased, he is putting on flesh, and is able to get quietly about for several hours a day.

I hope I have said enough to show there is nothing new in the use of quinine hypodermically, but that it is not the marvellous remedy some of its inexperienced advocates believe it to be; and lastly, that in the execution of the process the drug should not be injected into a muscle.

CASE OF SNAKEBITE IN THE LAKE DISTRICT.

By WILLIAM ALLEN, M.B., C.M.,
Hawkshead, Lancashire.

As few cases of snakebite have been recorded in this country, the following, which happily recovered, may prove interesting. Mr. J. P., aged 30, was walking through a wood on September 21st, 1902, when he came across an adder or viper (*Vipera berus*) which was basking in the sun. He procured a forked stick with which he held down the head of the snake, while he cut it off with a sharp knife, leaving only about one-eighth of an inch of body attached. In from fifteen to twenty minutes afterwards he took up the head to examine it, between the thumb and index finger of the right hand, when it bit him on the middle finger just above the nail, with one of the fangs only. A drop of blood appeared at once from the wound, which he sucked three or four times and spat out.

Pain began in a few seconds, and was like a wasp sting, shooting up to the armpit. He proceeded at once to the village, which was about half a mile away; after going about fifty yards his sight gradually grew dim and difficulty of breathing came on. That passed off, and was followed by a tingling sensation in the tongue, back of the mouth, and lips, which became swollen, the tongue protruding from the mouth. In a little while pain set in in the stomach, which prevented his walking, and he lay down on the grass. Cold sweats came on, the perspiration dropping off the face in

large drops; he then began to vomit, after which he felt easier, and was able to get to a neighbouring cottage.

He was seen professionally at 5 p.m., an hour and a-half after being bitten. He was suffering from collapse, with severe vomiting and diarrhoea. His sister, who was with him, had administered brandy and applied baking powder to the tongue previous to my arrival. I examined the finger, but could only find the slightest scratch, which I cauterized, and then administered a good dose of sal volatile; as the vomiting continued we gave him soda water and brandy—about half a pint of the latter in all. The collapse was treated by the usual methods.

The pupils were slightly dilated; the pulse was 110 and imperceptible at the wrists; the extremities were cold and the body bathed in perspiration. There was slight drowsiness, but he was quite conscious when spoken to. The temperature was normal and there were no convulsions. The swelling of the tongue had disappeared when I saw him, but the fauces were very red and swollen. There was no difficulty of breathing, but a feeling of tightness round the throat. I remained with him until 11 p.m., after which time he only vomited once. There was a little blood in the vomited matter.

The following morning I found the arm very much swollen and exceedingly painful, with fine red lines running up towards the axilla, to which I applied caustic, followed by fomentations of lead and opium. The patient was decidedly better generally and able to take liquid nourishment.

On September 24th the arm and the right side of the chest were covered by large ecchymosed patches, of a distinctly greenish colour, the swelling also was very considerable, but pain very much less. The discoloration and pain gradually subsided, and on September 29th the patient could use his arm freely and was able to both shoot and paint. There was no loss of power in the arm.

The case is interesting, seeing that the bite occurred a considerable time after the head had been detached from the body. The snake, which was 19 in. long, contained seven eggs, one of which had just hatched, the young snake measuring 6 in.

The Croonian Lectures

ON THE

NATURAL HISTORY AND PATHOLOGY OF PNEUMONIA.

By THE LATE J. W. WASHBOURN, C.M.G., M.D., F.R.C.P.,
Physician to Guy's and the London Fever Hospitals; Consulting Physician
to His Majesty's Forces in South Africa; etc.,

Delivered at the Royal College of Physicians, London, on
November 11th, 1902,

By W. HALE WHITE, M.D., F.R.C.P.,

AND EDITED

By J. W. H. EYRE, M.D., ETC.

[ABSTRACT.]

[DR. HALE WHITE said that the lectures he was about to deliver had been prepared by the late Dr. J. W. Washbourn, who was the Croonian Lecturer appointed for the year 1902. Before his death he had written the lectures in rough, and the task of revising and arranging them had been very kindly undertaken by Dr. J. W. H. Eyre.]

Pneumonia is a general term implying simply "inflammation of the lung tissue;" and as such includes all inflammatory processes occurring in the lungs, no matter how widely these may differ in their clinical phenomena or in their pathology. These remarks, however, relate chiefly to that form of pneumonia known as acute lobar pneumonia. Lobar pneumonia is defined as an acute infective disease, characterized anatomically by an inflammation of the lung tissue, resulting in the accumulation of fibrinous exudation, leucocytes, etc., within the alveoli, and clinically by a definite and fairly constant set of physical phenomena, directly consequent upon the anatomical changes. Ana-