

tion, or in diseases of the rectum to allow fæces to pass easily without giving patient unnecessary pain.

After a high enema, the patient must be kept in bed for a day or two and treated as for shock. Temperature and pulse carefully noted. Watch for symptoms and signs of hæmorrhage or obstruction, as the sudden emptying of an obstinate bowel may cause a hernia inter-susception, or great collapse.

HONOURABLE MENTION.

The following competitors receive honourable mention:—Miss J. G. Gilchrist, Miss Ethel E. Hall, Miss Gladys M. Rainey, Miss J. Hawkins, Miss Mary Burns, Miss T. Lyons, Miss S. A. Cross.

Miss J. G. Gilchrist writes:—To most patients the giving of enemas cause a certain amount of exhaustion. The patient should be as little exposed as possible, kept warm by hot bottles to the feet, and in case of faintness stimulants should be easily procurable.

QUESTION FOR NEXT WEEK.

- (a) What is meant by counter-irritation?
(b) Name the different ways of making counter-irritation.

A REMARKABLE DISCOVERY.

THE DELINEATION OF THE INTERNAL ORGANS BY AN ELECTRICAL METHOD.

A method whereby the internal organs can be delineated by an electrical method is one of the sensational scientific discoveries made during the present war, which has been quietly performed and its value tested at one of the casualty clearing stations in France for several months. Its discoverer is Sergeant James Shearer, of the R.A.M.C., a Scotsman by birth, who received his later education in America, where he graduated M.D.Ch.M. at the University of Washington, D.C., in 1907; a medical degree not recognized in Great Britain, therefore he could not be given a commission, but when it was found that he was possessed of special electrical knowledge, and believed that he saw a way in which it could be utilized for the purposes of the war, he was given opportunities of developing his ideas by the commanding officer of his unit.

According to the *British Medical Journal*, which publishes an illustrated article dealing with the new method, "the first subject that it brings to mind is X-ray photography, and the next is wireless telegraphy. It soon, however, becomes apparent that the work, whatever its value, has no relation to either of these methods.

UTILIZING THE ELECTRICITY GENERATED IN THE BODY.

"The new work, in fact, appears to succeed just where X-ray photography fails, or rather, it takes up the task of producing pictures of structures hidden far below the surface of the body, just at the point where X-ray photography ceases to perform it effectively. In other words, the new work attempts the delineation not of dense structures such as bone, but of living soft organs such as the liver, the kidneys, and the intestines. Its chief interest lies in the fact that it may be conceived as utilizing the electricity which is believed to be generated in the body. . . . The process of producing these pictures, as seen by the bystander, is very unimpressive. There is no darkening of rooms, no flashing of lights, and no crackling of sparks-gaps. In fact, the whole proceeding is so brief, and seemingly so simple, that when the results are observed the first sensation is one of bewilderment. A patient is laid on a plain deal table (insulated by standing it on glass), a little clicking is heard in a cupboard hard by, and after 60 seconds or so the bearers are directed to remove him. Nothing has been felt by the patient, little or nothing has been seen by the bystanders beyond what has been noted, yet a visible record of the outline of a living organ has been conveyed to a wax sheet. This is then printed on ordinary photographic sensitized paper."

The appliances used are two separate electrical batteries (Battery A and Battery B) of precisely equal strength, together with a means by which alternations in their currents can be produced and varied at will, and a revolving cylinder over which is suspended a needle hammer, capable of side to side as well as up and down movement, the two together bearing a resemblance to a barograph. This cylinder carries a rolled sheet of paper treated with paraffin wax on which the outline of the organ under examination is initially recorded. The needle hammer mentioned is connected with a tiny circle of carbon, like the diaphragm of a telephone machine, which is operated in its turn by a current detector, capable not only of picking up and measuring, but also of concentrating currents too small to be converted into force by any other means. The current in this particular case comes from the patient's body, arriving through a wire connected with one of the two electrodes mentioned as being seen outside the cupboard.

"There are two of these electrodes, each of which ends in a perforated zinc plate, or zinc wire screen, which is not placed in contact with

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