

we could only apply its searching rays to those bullets that had eluded the mere tactile methods of ourselves and the other surgeons. Still these were just the cases in which the rays really are of use, for in those cases in which we were able to find the bullets by other means, their use would only have been of interest to ourselves. Even if we had had the apparatus in working order after Domoko, it is more than doubtful if we should have had time to use it in the rush of cases, and I feel sure that in military surgery its use will be limited to just those doubtful cases to which we applied it, and never near the front nor in the first rush of cases to hospital after a battle, at which time the great majority of the bullets are removed. This was the only apparatus of its kind in Greece, or as far as we know in use in the Græco-Turkish war; and as this war is the first that has taken place since the discovery of the rays, the experience gained possesses additional interest.

"The machine was a very fine one by Messrs. Miller and Wood.

"TAKING SKIAGRAMS.

"We set up our apparatus at the Piræus Hospital because of its weight, and because we were near the *Rodney* whenever the battery needed recharging. We were also able to take skiagrams of cases in the Athens Hospital for the surgeons there, an offer of which they largely availed themselves, in this way supplying some of our most interesting cases. Our Chalcis cases that needed the rays we brought down by sea from there. Altogether we obtained a most interesting series of cases, taking skiagrams not only of those in which bullets were supposed to be *in situ*, but also of fractures and the results of treatment of fractures caused by bullet wounds. The following is a brief *résumé* of our work in this department, the skiagrams in nearly all cases having been taken by Mr. Fox-Symons, whose knowledge of photography and this its special application were of the greatest service. In taking the skiagrams no negatives were used, but the skiagrams were taken direct as positives on to Eastman's special paper. Although the definition obtained by this means is not so clear as when a negative is used, it is sufficiently so for all practical purposes, and this arrangement saved an immense amount of weight in the material sent out, as well as avoided the risk of breakage.

"LOCALIZING BULLETS.

"Whenever a bullet was present it appeared quite startling in its definition, and in every case we could tell not only its presence, but its nature, whether Martini, Mauser, or shrapnel, and whether complete or broken up. To exactly localize its position it was, of course, necessary to take two views at right angles to each other, and when possible this was always done. We had as well a very perfect 'screen' for converting the X-rays into light rays, and so permitting us to see without taking any print. We largely used this, sometimes obtaining a clearer view than we could get on paper, and, of course, always being able to localize more rapidly, from the possibility of looking from several points of view in succession.

"By these means we found eight bullets in various parts of the body, including one in the substance of the lung, two in the thigh—one of which was embedded in the middle of the bone—one in the shoulder-blade, two in the upper arm, one in the hand, and one probably at the back of the orbit. All of these bullets had eluded either ourselves or other surgeons, and most of them were subsequently successfully removed, though in one or two cases their position rendered this impossible. In several other cases we were able to disprove the existence of bullets supposed to be present.

"ROYAL INTEREST IN RÖNTGEN WORK.

"In some instances we found that bullets in their course had caused damage to bone without complete fracture, where from merely manual examination we had thought the soft parts alone had suffered. We took, in addition, a number of cases of injury to bone and joints, in which the bullets were known to have made their exit or have been removed, but the details of these belong rather to a medical paper. In all, a series of between forty and fifty cases were examined. The Royal Family were much interested in this apparatus, the first in Greece, and we had the honour of taking skiagrams of all their hands.

"The whole apparatus has been left complete in Greece, and will, we understand, be probably given to the University to be at the service of any of the Athenian hospitals. There can be no doubt that even from this war a good many more cases will yet return requiring the application of the rays, as many of the earlier cases must have left the hospitals with undetected bullets still *in situ*."

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