

terian Eye and Ear Charity Hospital, I have been testing the value of this method of diagnosing corneal lesions. The experiments number over a hundred, and have led me to positive conclusions.

Fluorescein is a red powder, soluble in water, a product of coal tar distillation. I employ a solution of 10 grains of the powder to the ounce of water, to which is added 15 grains of the bicarbonate of soda.

I have never known the solution to have an irritating effect, and I have used it in the most intense forms of corneal inflammation. The portions of the cornea stained retain the color from half an hour to several hours. The solution produces not the slightest impression upon the healthy cornea. I have always found that when positive defects in the corneal epithelium existed, in other words where there was actual loss of substance, the coloration was more apparent. So long, then, as it is possible to color any portion of the cornea, we may be certain that some lesion still exists. In excoriations of the cornea positive results were the rule. One case I remember particularly, where the cornea had been scratched by a blow from a twig, and where the extent of the excoriation was scarcely visible to even oblique illumination. Every detail of the wound, and every minute point, where the epithelium had been removed was clearly brought out by a drop of the fluorescein solution. In ulcers of the cornea positive results were always obtained. In simple superficial keratitis the coloration was much less distinct than when this disease was associated with an ulcer. In parenchymatous keratitis the results were invariably negative. In three cases of iritis, uncomplicated with corneal trouble, I failed to obtain any coloration. In two other cases of iritis of syphilitic origin where the cornea was involved, superficially as well as interstitially, marked coloration was observed. In two cases of acute glaucoma the result was absolutely negative.

In foreign bodies in the cornea, no matter how small the foreign substance was, its position and size were located to a nicety. Here the coloration was immediate and distinct, showing itself by a green ring just around the foreign body. In phlyctens of the conjunctiva the color was rather yellow than green. Only in those

cases where the phlycten was located on the limbus of the cornea, and the latter had been involved to some extent, was there any positive green coloration to be seen. Pterygia and pinguiculae gave negative results. With the exception, then, of phlyctenular conjunctivitis, the solution is inapplicable to any of the other forms of conjunctival inflammation.

When one understands that where the coloration is produced the anterior epithelium is involved, the agent is of value in detecting, with accuracy, lesions of this part of the cornea. Ulcers so small that it is impossible to see them by diffuse daylight, are brought out with perfect distinctness, quite as clearly, indeed, as under oblique illumination; and I can readily believe that small points, which it is possible to overlook even with the oblique illumination, would invariably be revealed by a drop of the solution, and, moreover, in half the time that it takes us to subject a patient to the former method. In minute ulcers of the cornea in very young children, where the blepharospasm and photophobia are frequently so intense that the lids have to be forced apart in order to get a view of the eye-ball, and then the latter is rolled about so continuously, and the cornea flits so rapidly before our eyes, that we are obliged to simply infer, from the attendant symptoms, the nature of the trouble without actually seeing the lesion itself, a drop of the solution will locate the disease and its extent, and bring it out distinctly so that it can be seen, no matter how fast the eye-ball moves about. In such cases I am inclined to think that the fluorescein solution will be a help in establishing a diagnosis. I am using the solution every day, and find it useful in bringing to light lesions of the cornea so small as to be readily overlooked in the hurry of a crowded clinic. Clinical experiments seem to show that positive results are only to be seen when there is some lesion or break in the anterior epithelium of the cornea. Troubles beneath the corneal surface give vague, and hence unreliable, results. Two of my colleagues on the staff of the Presbyterian Eye and Ear Hospital, Drs. Harlan and Woods, have been cooperating with me in trying the solution, and their views coincide entirely with mine.—*R. L. Randolph, M.D., in Johns Hopkins Hospital Bulletin.*